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UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

Vol. 35, No. 4 October, 1932

MONTHLY
LABOR REVIEW

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Union scales of wages and hours of labor, May 15, 1931. Bulletin No. 566.

UNITED STATES DEPARTMENT OF LABOR
W. N. DOAK, Secretary
BUREAU OF LABOR STATISTICS
CHARLES E. BALDWIN, Acting Commissioner

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This Issue in Brief

The productivity of labor in the United States postal system increased 63.4 per cent between 1908 and 1931. In other words, on the basis of the 1908 level of efficiency, 171,739 additional employees would have been required in 1931 to do the work handled in that year. This increase in the output per employee was due to many causes—development and improvement of mechanical equipment, better coordination of administrative activities, adaptation of the physical plant to changing conditions and needs, etc. Page 745.

Of the money spent in building construction, 63.6 per cent goes for material and 36.4 per cent for labor, according to a recent survey by the Bureau of Labor Statistics covering 15 representative cities. The percentage received by labor was slightly more on residential buildings than on nonresidential buildings. The percentage of labor and of material costs differed considerably in the different cities. In Boston, for example, labor accounted for 41 per cent of the total cost of building operations, while in Dallas labor received only 27.2 per cent of the total cost of the building. In the North, in general, labor received a higher percentage of the total cost of building operations than in the South. Page 763.

That age is not so serious a bar to employment in the better class of large department stores as in some other lines of work is shown by a study recently made in Springfield, Mass. In each of the three stores surveyed, from one-fourth to one-fifth of the staff was over 45 years of age, and nearly one-fourth of the total group was 60 or more. Over a third had been engaged after reaching 45. The personal relations established between the older employees and the customers they had served for years were looked upon as a valuable asset to the employers. Page 773.

A study of the day-by-day employment in the construction of a large apartment house, made by the Bureau of Labor Statistics, shows the amount of work, in terms of man-hours, done by each occupation or trade; the duration of work for each class of employees; and the particular periods when the several classes of employees were actively employed. In addition, man-hour output figures were obtained for certain occupations. Page 782.

A levy of $8 a week for each pressing machine used full time in the cloak and suit industry of New York City has been decreed by the impartial chairman of the industry. This levy is to be paid into an unemployment fund to be administered by the union for the benefit of pressers displaced by the use of pressing machines. Page 889.

A general program for spreading work was drawn up and set in motion by a national conference of banking and industrial committees of the 12 Federal Reserve districts meeting in Washington the latter part of August. In accordance with the recommendation of President Hoover and the organizing committee of the conference, a subcommittee was appointed to promote increased employment through the sharing of work. The campaign will be carried on

through the banking and industrial committees of each reserve district, and the cooperation of manufacturers' associations and various national, State, and local organizations will be sought. Page 790.

Average hourly earnings in the leather industry in the spring of 1932 were 49.3 cents for male workers and 30.3 cents for female workers, according to a study made by the Bureau of Labor Statistics. Actual weekly earnings of males averaged $20.78 and of females $12.41; full-time weekly earnings would have averaged $24.85 and $15.15, respectively. The hours actually worked per week averaged 42.1 for males and 40.9 for females, while full-time hours per week were 50.4 for males and 50 for females. The survey covered 114 representative tanneries, having 21,399 wage earners, in 15 States. Page 902.

Earnings in the sawmill industry in 1932 averaged 25.6 cents per hour and $14.28 per full-time week, compared with 35.9 cents per hour and $20.28 per full-time week in 1930, as shown by a survey by the Bureau of Labor Statistics of 259 representative sawmills, with 32,130 wage earners, in 21 States. Actual earnings in one week averaged $10.25 in 1932 as against $17.46 in 1930. Full-time working hours per week averaged 55.8 in 1932 as compared with 56.5 in 1930, while the hours actually worked in 1932 and 1930 averaged 40.1 and 48.6, respectively. Page 910.

The average earnings of 71 woman clerical and factory workers in Richmond, Va., for the year ended March 31, 1931, were $942, or 94.5 per cent of their average annual income. The average annual expenditures of this group amounted to $971, distributed as follows: Primary expenses (board, room, fuel, light, and laundry), 42.2 per cent; clothes, 28.4 per cent; health, 2.9 per cent; recreation and amusement, 4.7 per cent; education and advancement, 4.0 per cent; miscellaneous, 17.8 per cent. More detailed figures show some interesting contrasts in the amounts and percentages of expenditure for the same items in the respective budgets of the factory and clerical groups. Page 972.

The unemployment situation in Hawaii is less serious than it is on the mainland of the United States, according to a report made in the summer of 1932 by the chairman of the governor's committee on unemployment in that Territory. Hawaii has no winter, and vegetables and other food crops can be raised there the year round. Some subsistence, at least in the country districts, can also be secured by fishing. The major causes of unemployment have been the curtailment of the activities of the pineapple companies and the cutting down of construction work. Youths unable to find jobs upon graduating from school constitute a difficult problem. Page 794.

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Technological Changes and Employment in the United States Postal Service

Summary

THE Federal postal system operates under the influence of forces which are commonly supposed to be hostile to initiative and change. In the first place, the fact that the post office is one of our oldest institutions might be supposed to imbue it with the conservatism of age. The antiquity of the postal system is indicated by the fact that as early as 1775, even before the Declaration of Independence, Benjamin Franklin assumed the office described as that of Postmaster General.

Another factor which tends, according to popular conception, to prevent adaptability and retard progress is the noncompetitive nature of the business carried on by the post offices. To be sure, there is an element of competition to be found in the fact that there are alternative methods of communication, of handling goods transported by parcel post, and of securing certain of the special services, such as that rendered by the postal savings division. There is also a competitive element in the spirit of rivalry oftentimes apparent between post offices and between groups and individuals within a post office. But in general, the competitive influence in private business resulting from the existence of rival units of enterprise offering similar services within the same community is not to be found in the Postal Service.

Such assumptions as have been briefly outlined above are undoubtedly taken for granted extensively by patrons of post offices. But a study of the recent history and the present status of the postal system, just completed by the United States Bureau of Labor Statistics, shows that that system has been undergoing a series of changes which, although more continuous and therefore less noticeable, are probably no less rapid and radical in character than the changes that have been characteristic of American business in general. One needs to go back no more than a quarter of a century to discover that the system has been revolutionized in regard to the nature and variety of services rendered; the use of mechanical methods; the introduction of administrative changes; the adaptation of the physical plant to changing conditions and needs; and the increased productivity of labor.

Since 1908 (the first year included in the present study) the vast and complicated system of parcel post has been developed. Connected with parcel post has been the introduction of the collect-on-delivery system, the insuring of parcels, and special-handling arrangements. Among the other additions to the services rendered are the Postal Savings System, village delivery, and extensions of the delivery system in both city and country.

For the handling of a wide variety of activities, mechanical methods have been devised and extended in recent years to an extent that is seldom realized by patrons of the system. Improved canceling and postmarking machines are used in all offices large enough to justify their adoption. In preparing letters for the canceling machine, mechanical facing tables are used. Many varieties of automatic conveyors have been devised and put into use. An important factor in the development of motor vehicles and airplanes has been the extensive patronage of these industries by the postal system. Large firms and institutions have been encouraged to make use of such devices as metered postage machines. In the handling of finances and accounts, many kinds of the most efficient types of bookkeeping and calculating machines are in extensive use.

There has been an even greater variety of administrative changes for the purpose of promoting efficiency. Among these may be included a definite budgeting of funds for encouraging invention and for buying or renting and maintaining labor-saving devices. A division of cost ascertainment has been established for carrying on a continuing study of the various phases of income and expenditure as a basis for conducting the financial affairs of the postal system according to sound economic principles. The handling of the accounts of smaller offices has been decentralized in what is known as the district post-office accounting system. Remarkable economies have been effected in the money-order accounting system. Surveys have been conducted for the purpose of discovering the most efficient methods, formulating plans for standardized procedures and making available to the entire system the best methods found anywhere in the system. An administrative reorganization has coordinated the mailing and finance divisions in the various larger offices. In order to avoid slack time and to make possible a full utilization of the labor facilities of the system, postal employees perform a variety of functions and thus the advantages of specialization are combined with the economies of interchangeability of labor. An important illustration of recent coordination of labor for greater efficiency is the unit system for facing,[1] canceling, and separating letters in the larger offices. The development and general application of a system of efficiency ratings has characterized recent postal history.

In the adaptation of the physical plant to changing conditions and needs, the principal problems have been created by the development of the Parcel Post System. During the first decade of the present century an extensive program of construction was undertaken and buildings then put up were remarkably efficient for the handling of the classes of mail then authorized by law. With the development of the Parcel Post System during the second decade of the century, the existing plant proved to be extremely inadequate. Its inadequacy was accentuated by the halting of construction programs as a result of the World War. With the working out of experimental methods for handling parcel post and the new special services and with the further improvement of the technique of handling other kinds of mail and the older special services, a new program of construction was recently undertaken and is now well advanced.

The various changes thus briefly outlined have been accompanied by a remarkable increase in the productivity of labor. On a con-

[1] Arranging the pieces of mail so that the stamps all face the same way.

servative basis of calculation (conservative in the sense that the change in the volume of output is underestimated and the change in the volume of labor is overestimated) the index of productivity of labor in the postal system increased from a base of 100.0 in 1908 to 171.8 in 1930, declining, because of the falling off in business, to 163.4 in 1931.

In other words, on the basis of the 1908 level of efficiency, 171,739 additional employees would have been required in 1931 to do the work handled in that year, or 63.4 per cent more than the number actually employed.

Measuring Output

Handling of Mail

THE years immediately preceding the introduction of the Parcel Post System were marked by successful efforts on the part of the Post Office Department to measure the volume of services rendered in the entire system. This is particularly true of the years 1908, 1910, and 1912. The estimates for these years were based on extensive special weighings and surveys undertaken particularly in connection with the question of readjusting rates on second-class matter.

Then followed a long interval characterized by the extension of the Parcel Post System, beginning in 1913, and by the war years and the period of reconstruction, when the methods of measurement worked out earlier were no longer applicable and when the urgency of war-time demands presumably prevented the development of new methods. As a result of the work of the Commission on Postal Service, authorized by Congress in 1920, there was organized in 1923 the division of cost ascertainment. Since 1926 this branch of the Postal Service has functioned regularly and comprehensively in a remarkably successful measurement of the output of the entire system.

Changes in the productivity of labor are obviously affected most vitally by technological changes, either mechanical or administrative. The most significant technological changes in the postal system have occurred since the beginning, in 1908, of dependable measurement of the output of the postal system. The Joint Commission of Congress on Business Methods of the Post Office Department stated in its preliminary report, published in 1908, that "there is a lamentable lack of labor-saving devices practically throughout the whole Postal Service." [2]

This commission was appointed in the first place for the purpose of studying the problem of improving administrative methods. Its investigation revealed the fact that not only was the postal system poorly equipped with respect to mechanical devices, but the management of labor, the measurement of efficiency, and the business methods in general afforded opportunities for extensive improvement.

The period chosen by the Bureau of Labor Statistics, in its present survey, for studying the output of the postal system begins, therefore, with the years immediately preceding the introduction of the Parcel Post System, when relatively few technological improvements had affected the productivity of labor and when the measurement of output was first put on a dependable basis. The years from 1913 to 1925 are omitted because of the complications of the rapidly extending Parcel Post System and of the war and reconstruction when dependa-

[2] United States. Congress. Joint Commission on Business Methods of the Post Office Department. Preliminary report, 1908, p. 77. (60th Cong., 1st Sess., S. Rpt. No. 201.)

ble measurement is impossible. The years 1926 to 1931 are included because of the successful work of the division of cost ascertainment in making measurement possible on a basis comparable to the years immediately preceding the introduction of the Parcel Post System.

The principal output of the postal system consists, obviously, of the various kinds of mail. The classification adopted for the fiscal year 1907–8, and still used by the division of cost ascertainment, includes first-class mail (chiefly letters), second-class mail (periodicals) third-class mail (predominately circulars), fourth-class mail (now parcel post), franked mail, and penalty mail (largely departmental mail). One additional classification now used is that of mail "free for the blind."

On the basis of the special surveys and studies of output made from 1907 to 1912 and of the later work of the division of cost ascertainment, the Post Office Department has been able to make dependable estimates of the amount of the various classes of mail handled during the fiscal years ending June 30, 1908, 1910, 1912, and 1926 to 1931.[3] The results are incorporated in Table 1.

TABLE 1.—ESTIMATED NUMBER OF PIECES OF DOMESTIC[1] MAIL HANDLED, BY CLASSES OF MAIL, IN SPECIFIED FISCAL YEARS

Fiscal year	First-class mail	Second-class mail	Third-class mail	Fourth-class mail
1908[2]	7,102,704,806	3,805,584,029	1,720,964,103	145,306,026
1910[4]	8,310,164,623	4,336,259,864	2,013,528,001	170,008,050
1912[6]	9,159,648,117	4,934,002,770	2,219,355,307	239,982,313
1926	15,265,624,116	4,658,267,730	3,962,462,729	770,360,626
1927	16,283,564,220	4,753,291,005	4,061,604,835	742,589,397
1928	16,706,197,518	4,678,023,212	3,837,689,374	751,980,239
1929	17,169,597,132	4,833,738,538	4,341,142,570	770,397,277
1930	16,901,204,170	4,968,371,363	4,324,939,431	837,308,320
1931	15,911,567,916	4,856,857,633	4,100,020,837	765,661,536

Fiscal year	Penalty matter	Franked matter	"Free for blind" mail	Total
1908[2]	231,716,587	9,007,574	(3)	13,015,283,125
1910[4]	281,647,268	(5)	(3)	15,111,607,806
1912[6]	310,437,878	(5)	(3)	16,863,426,385
1926	456,104,444	32,733,617	195,007	25,145,748,339
1927	438,590,586	50,487,129	111,949	26,330,239,121
1928	471,911,383	46,989,467	390,758	26,493,181,951
1929	448,909,071	37,178,342	391,696	27,601,354,626
1930	459,606,087	41,405,009	538,220	27,533,372,600
1931	511,993,883	38,843,177	1,192,143	26,186,137,125

[1] Foreign mail is omitted because there is no adequate basis for comparing the earlier and later periods. The amount is relatively small, and the ratio of change in the quantity of foreign mail is probably not radically different from that of domestic mail.
[2] United States. Post Office Department. Cost of transporting and handling the several classes of mail matter. Washington, 1910, p. 5.
[3] No separate estimate made.
[4] United States. Post Office Department. Second-class matter, by J. J. Britt. Washington, 1911, pp. 3, 4.
[5] Included under penalty matter.
[6] United States. Post Office Department. Annual report, 1912, p. 307.

Most of the classes of mail increased in number of pieces up to 1929 and since that date the number has somewhat declined. Since 1908, the number of pieces of first-class mail have considerably more than doubled, increasing from somewhat over 7,100,000,000 in that year to about 17,200,000,000 in 1929 and declining to somewhat less

[3] Throughout the tables shown in this article the years are fiscal years ending June 30.

than 16,000,000,000 in 1931. The number of pieces of second-class mail increased much less rapidly, from approximately 3,800,000,000 in 1908 to more than 4,800,000,000 in 1931. The outstanding fact regarding second-class mail is the comparatively slight difference in volume in 1912 and 1926 to 1931. This is due mainly to changes in rates and regulations, notably in 1918 and 1919.[4] The increase in the amount of third-class mail was from about 1,721,000,000 in 1908 to about 4,100,000,000 in 1931.

In the case of fourth-class mail, consisting mainly of merchandise, the introduction of the Parcel Post System in 1913 led to a tremendous expansion in number of parcels from about 145,000,000 in 1908 to nearly 766,000,000 in 1931. But even more significant than the increase in number of pieces was the increase in the size and in the variety of articles. In the case of penalty matter (consisting largely of departmental mail) and franked matter (made up in the main of congressional mail), the combined increase corresponds quite closely to the rate of increase of first-class and third-class mail, although the quantity is of course much less—about 240,000,000 pieces in 1908 and about 550,000,000 pieces in 1931.

It is apparent that from the point of view of the amount of work necessary for the handling of mail, there are great differences between the various classes of mail. If these different classes are to be combined into a total volume of mail handled, it is necessary, in comparing changes in volume of output with changes in volume of labor, to weight the classes of output by means of labor-weighting factors. Particularly is this true of fourth-class mail. If the classes of mail increased in the same ratio and if the average size and weight per piece (or other qualities affecting the amount of labor required for handling) remained approximately the same throughout the years included in the present study, the weighting would not be so essential because the derived ratios would remain relatively constant. In the case of second-class and third-class mail and of franked and penalty mail the changes in the number of pieces and in the average weight and bulk per piece have not been so great as in the case of fourth-class mail, although when these classes of mail are not weighted the result, from the point of view of the amount of labor required, is an underestimate of the combined volume of output.

For fourth-class mail, labor-weighting factors are available. On the basis of extensive tests made by the Post Office Department it was reported in 1909 that "ordinary letters and circulars can be handled in about one-third the time required for newspapers and packages."[5] On the basis of this authority the number of pieces of fourth-class mail is multiplied by three as a labor-weighting factor for the years 1908, 1910, and 1912.

After the introduction of the Parcel Post System in 1913, this weighting factor was no longer applicable because of the great increase in the size and weight of parcels. For the more recent period covered there is available the information secured by extensive surveys carried on by post-office inspectors. Careful records were kept of the number of pieces handled, the number of man-hours, and the average number of pieces handled per hour, in the letter section and the parcel-post section of the mailing division of large

[4] United States. Post Office Department. Annual report, 1919, pp. 17–22.
[5] United States. Post Office Department. Cost of transporting and handling the several classes of mail matter and of conducting the registry, money order, and special delivery services. Washington, 1910, p. 13.

offices throughout the country. The records covered a variety of conditions.

A comparison of the average time per piece results in a ratio of 1 for first-class mail to 8.2 for parcel-post mail—a conservative estimate of the difference in the amount of labor required. Therefore, in Table 2, for each of the years 1926 to 1931 the number of pieces of parcel-post mail is multiplied by 8.2 as a labor-weighting factor.

It is virtually impossible to weight the other classes of mail.

TABLE 2.—CHANGES IN NUMBER OF PIECES OF DOMESTIC MAIL HANDLED, IN SPECIFIED FISCAL YEARS, WITH FOURTH-CLASS MAIL WEIGHTED ON BASIS OF RELATIVE AMOUNT OF LABOR REQUIRED

Fiscal year	Number of pieces of fourth-class mail		Number of pieces of all other classes	Total number of pieces (including fourth class weighted)	Index numbers of change in volume (1908=100.0)
	Unweighted	Weighted on basis of relative labor required [1]			
1908	145,306,026	435,918,078	12,869,977,099	13,305,895,177	100.0
1910	170,008,050	510,024,150	14,941,599,756	15,451,623,906	116.1
1912	239,982,313	719,946,939	16,623,444,072	17,343,391,011	130.3
1926	770,360,696	6,316,957,707	24,375,387,643	30,692,345,350	230.7
1927	742,589,397	6,089,233,055	25,587,649,724	31,676,882,779	238.1
1928	751,980,239	6,166,237,960	25,741,201,712	31,907,439,672	239.8
1929	770,397,277	6,317,257,671	26,830,957,349	33,148,215,020	249.1
1930	837,308,320	6,865,928,224	26,696,064,280	33,561,992,504	252.2
1931	765,661,536	6,278,424,595	25,420,475,589	31,698,900,184	238.2

[1] Weights used were 3 for 1908, 1910, and 1912; and 8.2 for 1926–1931.

The total number of pieces of mail, including fourth-class mail weighted, and other classes unweighted, increased from about 13,300,000,000 in 1908 to about 33,562,000,000 in 1930, and declined in 1931 to about 31,699,000,000. The index of change in volume ran from a base of 100.0 in 1908 to 252.2 in 1930 and 238.2 in 1931. This estimate of the change in the volume of mail matter, although decidedly conservative because of the inclusion of all classes except fourth-class mail without weighting, is nevertheless as close an approximation of the change as available weighting factors make possible.

Special Services

Since 1912 the special services rendered by the Post Office Department have increased rapidly in variety and in the number of transactions. The special services were long confined to registrations, money orders, and special deliveries. After 1912, all of these increased rapidly in number of transactions. The first year in which statistics relating to postal-savings accounts appear was 1912. After 1912 the collect-on-delivery system and the insuring of parcels rapidly swelled the volume of special transactions.

The growth of the special services during the years covered in Tables 1 and 2 is shown in Table 3. Table 3 also includes the results of the use of labor-weighting factors in connection with special-service transactions.

It is apparent that the amount of labor per transaction varies greatly with the different classes of special services and that the

amount of labor required for the special-service transactions is not the same as for the handling of mail. Tables 1 and 2 show the results of an effort to reduce the different classes of mail to a common denominator in terms of the average amount of labor per piece for handling first-class mail. In order to reduce the special-service transactions to the same common denominator it is necessary to compare them with first-class mail in respect to the amount of labor required.

There has been no adequate record of the amount of time required per transaction and it is therefore necessary to approach the problem indirectly. This can be done on the basis of the studies made by the division of cost ascertainment. The results of the studies made by the division of cost ascertainment are expressed in terms of expense, rather than in terms of amount of labor, but in regard to first-class mail and the several special services the predominant element of cost is labor. This is true particularly of the special services, for with them the element of transportation plays virtually no part as compared with the handling of first-class mail. Because of the great importance of transportation as an element of cost in the handling of classes of mail other than letter mail, the cost of handling can not be used as a labor-weighting factor for the different classes of mail. But in respect to first-class mail and the special services, the costs other than labor are slight and tend to cancel out, with the exception of the cost of transportation, which applies to the handling of letters but not to the special-service transactions. The method used, therefore, is a conservative one and in all probability gives an underestimate of the total weighted volume of output. As is indicated by the weighting factors given in Table 3, the average cost per item ranges, on an index basis, from 1 in the case of pieces of first-class mail, to 156 in the case of depositors in the Postal Savings System.

TABLE 3.—CHANGES IN NUMBER OF SPECIAL-SERVICE TRANSACTIONS, POSTAL SYSTEM, IN SPECIFIED FISCAL YEARS, UNWEIGHTED, AND WEIGHTED ON BASIS OF APPROXIMATE DIFFERENCES IN AMOUNT OF LABOR INVOLVED

Fiscal year	Registrations, paid and free		Money orders		Special-delivery transactions	
	Unweighted	Weighted [1]	Unweighted	Weighted [2]	Unweighted	Weighted [3]
1908	40,151,797	614,322,494	68,576,210	555,467,301	13,734,514	92,021,244
1910	42,053,574	643,419,682	81,417,639	659,482,876	15,440,033	103,448,221
1912	42,235,000	646,195,500	88,995,153	720,860,739	18,366,377	123,054,726
1926	82,011,928	1,254,782,498	195,687,918	1,585,072,136	92,243,473	618,031,269
1927	82,162,947	1,257,093,089	196,962,507	1,595,396,307	93,725,425	627,960,348
1928	83,486,646	1,277,345,684	198,945,390	1,611,457,659	95,416,666	639,291,662
1929	89,144,845	1,363,916,129	202,430,322	1,639,685,608	99,046,407	663,610,927
1930	92,668,468	1,417,827,560	205,263,380	1,662,633,378	101,769,753	681,857,345
1931	80,740,703	1,235,332,756	192,584,774	1,559,936,669	94,072,832	630,287,974

Fiscal year	C. O. D. transactions		Insurance transactions		Postal-savings accounts (i. e., number of depositors)		Total number (weighted)	Index numbers of change (1908=100)
	Unweighted	Weighted [4]	Unweighted	Weighted [5]	Unweighted	Weighted [6]		
1908							1,261,811,039	100.0
1910							1,406,350,779	111.5
1912					243,801	38,032,956	1,528,143,921	121.1
1926	51,083,653	638,545,663	137,857,693	716,860,004	339,305	52,931,580	4,866,223,150	385.7
1927	49,820,640	622,758,000	133,378,223	693,566,760	411,394	64,177,464	4,860,951,968	385.2
1928	49,297,283	616,216,038	132,034,024	686,576,925	412,250	64,311,000	4,895,198,968	388.0
1929	49,600,219	620,002,738	130,939,891	680,887,433	413,990	64,582,440	5,032,685,275	398.9
1930	46,187,859	577,348,238	126,673,256	658,700,931	463,827	72,357,012	5,070,724,464	401.9
1931	40,555,435	506,942,938	112,312,231	584,023,601	770,841	120,251,196	4,636,775,134	367.5

[1] Weight used was 15.3.
[2] Weight used was 8.1.
[3] Weight used was 6.7.
[4] Weight used was 12.5.
[5] Weight used was 5.2.
[6] Weight used was 156.0.

Table 3 shows a doubling of the number of registrations between the years 1908 and 1931, in spite of the considerable decline during the latter year. The number of money orders issued increased even more considerably from 1908 to 1930, though declining in 1931. A still greater rate of increase was shown in the special-delivery transactions between 1908 and 1930, though this service also fell off in 1931.

Due to changes in postal regulations and to recent business conditions, the number of collect-on-delivery transactions (one of the services introduced after 1912) declined from 1926 to 1931. The number of insurance transactions also showed a decline. In regard to the Postal Savings System it is impossible to include the number of transactions (that is, the number of deposits and withdrawals), but it is likely that for a period of years the average number of deposits and withdrawals per depositor remains approximately constant. Due to confidence in the soundness of the Postal Savings System a large increase in the number of depositors occurred during 1930 and 1931.

The total volume of services rendered, including the several classes of mail and the several kinds of special services, weighted as already indicated, is presented in Table 4.

TABLE 4.—CHANGES IN ESTIMATED NUMBER OF UNITS OF OUTPUT OF THE POSTAL SYSTEM, IN SPECIFIED FISCAL YEARS, WEIGHTED ON BASIS OF ESTIMATED DIFFERENCES IN AMOUNT OF LABOR REQUIRED

Fiscal year	Number of pieces of mail handled (weighted [1])	Number of special service transactions (weighted [2])	Total	
			Number	Index numbers of change
1908	13,305,895,177	1,261,811,039	14,567,706,216	100.0
1910	15,451,623,906	1,406,350,779	16,857,974,685	115.7
1912	17,343,391,011	1,528,143,921	18,871,534,932	129.5
1926	30,692,345,350	4,866,223,150	35,558,568,500	244.1
1927	31,676,882,779	4,860,951,968	36,537,834,747	250.8
1928	31,907,439,672	4,895,198,968	36,802,638,640	252.6
1929	33,148,215,020	5,032,685,275	38,180,900,295	262.1
1930	33,561,992,504	5,070,724,464	38,632,716,968	265.2
1931	31,698,900,184	4,636,775,134	36,335,675,318	249.4

[1] For weights used, see footnote to Table 2. [2] For weights used, see footnotes to Table 3.

The volume of mail handled (weighted) increased from about 13,306,000,000 in 1908 to about 33,562,000,000 in 1930, and declined to about 31,699,000,000 in 1931. The volume of special-service transactions (weighted) increased from 1,262,000,000 in 1908 to 5,071,000,000 in 1930, and declined to 4,637,000,000 in 1931. The total volume of output (weighted) increased from 14,568,000,000 in 1908 to 38,633,000,000 in 1930, and declined to 36,366,000,000 in 1931. The index of change runs from a base of 100.0 in 1908 to 265.2 in 1930, and 249.4 in 1931.

It is apparent that the figures are approximations only. Fortunately, however, there is available a method of checking the validity of the weighting factors used. On the basis of its extensive studies of the entire postal system, the division of cost ascertainment has been able to compute the approximate proportion of time of all postal employees devoted to the handling of first-class mail. This appor-

tionment of time makes possible an alternative method of computing output, for the fiscal years 1926 to 1931, equated on the basis of the amount of time required for handling first-class mail. For purposes of comparison the results are shown in Table 5, which confirms the view that the labor-weighting factors used in the preceding tables are conservative.

TABLE 5.—CHANGES IN NUMBER OF UNITS OF OUTPUT OF THE POSTAL SYSTEM, FISCAL YEARS 1926–1931, ESTIMATED ON BASIS OF PER CENT OF TIME OF POSTAL EMPLOYEES DEVOTED TO FIRST-CLASS MAIL

Fiscal year	First-class mail		Other classes of mail and special-service transactions		Total number of units of output
	Number of pieces	Per cent of total time of postal employees	Per cent of total time of postal employees	Number of units of output (calculated on basis of per cent of time required)	
1926	15, 265, 624, 116	42. 401	57. 599	20, 737, 357, 184	36, 002, 981, 300
1927	16, 283, 564, 220	43. 772	56. 228	20, 917, 304, 380	37, 200, 868, 600
1928	16, 706, 197, 518	43. 773	56. 227	21, 459, 332, 582	38, 165, 530, 100
1929	17, 169, 597, 132	43. 555	56. 445	22, 250, 899, 068	39, 420, 496, 200
1930	16, 901, 204, 170	43. 232	56. 768	22, 192, 994, 930	39, 094, 199, 100
1931	15, 911, 567, 916	43. 394	56. 606	20, 756, 100, 184	36, 667, 668, 100

The use of the amount of labor required per piece and per transaction as weighting factors may be criticized on the ground that the amount of labor varies with technological changes and that one of the objects of the bureau's study was the measurement of the effects of technological changes on volume of labor. As to this it may be said that the inclusion of fourth-class mail and of the special-service transactions without weighting would give results so inaccurate as to be misleading. Since it may safely be assumed that technological changes have tended to reduce the amount of time required per unit of output, there is additional basis for the statement that the estimates of output are conservative. While it is desirable to have as accurate an estimate as possible of the effects of technological changes on volume of employment, it seems desirable to underestimate rather than to overestimate the effects.

One reason, then, for considering that the weighted estimates of the increase in output are conservative is the nature of the labor-weighting factors already discussed. Another reason is the fact that the estimates of output do not include various intangible elements of output. These elements include, for example, extensions of the direct delivery of mail in place of requiring patrons to come to the post office to secure their mail; and various facilities for promoting safety and increasing the speed of handling. The amount of labor used for improving the quality of service can not be isolated from the amount of labor required for increasing the quantity of output. The result is an unavoidable underestimate of changes in total volume of output as compared with changes in volume of labor.

Classes of Labor and Volume of Employment

IT HAS been seen that the problem of measuring the output of the postal system entails many difficulties. Measuring the changes in the volume of labor is a problem no less difficult. The vastness of

the system, with its ramifications throughout the country; the use both of direct Government employees and of workers under various contractual arrangements; the use of permanent and full-time employees, and also of temporary and part-time labor; and the great variety of types and classes of work—these are some of the conditions which complicate the problem of the exact measurement of changes in the volume of labor.

The main groups of postal employees are the following: Postmasters and assistant postmasters; clerks and supervisory force in first-class and second-class offices; city carriers; rural carriers; watchmen, messengers, and laborers in first-class and second-class offices; railway mail clerks; and departmental employees, mainly in Washington. There are various lesser groups and groups of an irregular nature, together with workers who are on a contractual basis. Among these may be mentioned the star-route carriers, mail messengers, clerks in third-class and fourth-class offices, motor-vehicle personnel, village carriers, and clerks in contract stations.

TABLE 6.—CHANGES IN NUMBER OF POSTAL EMPLOYEES, IN SPECIFIED FISCAL YEARS, BY PRINCIPAL GROUPS AND EQUATED ON FULL-TIME, ANNUAL MAN-POWER BASIS

Fiscal year	Postmasters		Assistant postmasters		Clerks and supervisory force, first and second class offices				Departmental employees, inspectors, and clerks at headquarters		Railway Mail Service employees			
					Number			Index numbers			Number			Index numbers
	Number	Index numbers	Number	Index numbers	Regular	Temporary	Total		Number	Index numbers	Regular	Temporary	Total	
1908	60,704	100.0	1,862	100.0	28,211	365	28,576	100.0	1,741	100.0	15,295	(1)	15,295	100.0
1910	59,580	98.1	2,095	112.5	31,825	444	32,269	112.9	1,729	99.3	16,795	(1)	16,795	109.8
1912	58,729	96.7	2,329	125.1	33,714	471	34,185	119.6	1.733	99.5	17,075	(1)	17,075	111.6
1926	50,601	83.4	2,723	146.2	67,071	7,027	74,098	259.3	2,067	118.7	20,411	1,994	22,405	146.5
1927	50,266	82.8	2,745	147.4	68,708	7,754	76,462	267.6	2,088	119.9	20,550	2,045	22,595	147.7
1928	49,944	82.3	2,756	148.0	69,818	8,315	78,133	273.4	2,090	120.0	20,854	2,046	22,900	149.7
1929	49,482	81.6	2,776	149.1	70,987	10,012	80,999	283.5	2,111	121.3	21,229	2,156	23,385	152.9
1930	49,063	80.8	2,781	149.4	72,015	10,429	82,444	288.5	2,112	121.3	21,185	2,127	23,312	152.4
1931	48,733	80.3	2,782	149.4	71,621	9,762	81,383	284.8	2,143	123.1	[2] 20,945	2,120	23,065	150.8

Fiscal year	City carriers				Rural carriers				Watchmen, messengers, and laborers, first and second class offices				Grand total	
	Number			Index numbers	Number			Index numbers	Number			Index numbers	Number (equated)	Index numbers
	Regular	Temporary	Total		Regular	Temporary	Total		Regular	Temporary	Total			
1908	26,352	1,388	27,740	100.0	39,143	1,336	40,479	100.0	1,072	(1)	1,072	100.0	177,469	100.0
1910	28,715	1,440	30,155	108.7	41,079	1,497	42,576	105.2	1,200	(1)	1,200	111.9	186,399	105.0
1912	29,962	1,379	31,341	113.0	42,199	1,559	43,758	108.1	1,330	(1)	1,330	124.1	190,480	107.3
1926	48,238	6,724	54,962	198.1	45,315	2,245	47,560	117.5	4,071	473	4,544	423.9	258,960	145.9
1927	50,117	7,163	57,280	206.5	44,730	2,218	46,948	116.0	4,312	613	4,925	459.4	263,309	148.4
1928	51,293	7,735	59,028	212.8	44,288	2,247	46,535	115.0	4,536	637	5,173	482.6	266,559	150.2
1929	52,719	8,884	61,603	222.1	43,840	2,398	46,238	114.2	4,741	705	5,446	508.0	272,040	153.3
1930	53,762	9,357	63,119	227.5	43,278	2,268	45,546	112.5	4,890	747	5,637	525.8	274,014	154.4
1931	53,387	9,131	62,518	225.4	42,412	2,260	44,672	110.4	4,876	743	5,619	524.2	270,915	152.7

[1] No data available. Work now done by temporary employees was then handled largely by regular employees by means of longer hours, overtime, and Sunday work without extra compensation.

[2] Not including 989 appointed as a result of the 44-hour work week law effective July 1, 1931.

Changes in the number of employees in the principal groups during the years included in the previous tables are indicated in Table 6.

As may be seen from Table 6, the number of postmasters decreased considerably, from 60,704 in 1908 to 48,733 in 1931, the index running form a base of 100.0 to 80.3. This decline in the number of postmasters corresponds, of course, to the decline in the number of post offices, and this in turn has been largely the result of the extension of Rural Delivery Service, combined with the improvement of transportation facilities and the readier maintenance of contacts by country people with towns. The number of assistant postmasters increased approximately 50 per cent, from 1,862 in 1908 to 2,782 in 1931.

As regards clerks and supervisory employees in first-class and second-class offices, the number of temporary employees actually on the pay rolls is considerably larger than the number shown in the table. In order to put them on a basis comparable with that of regular employees, it is necessary to ascertain the total amount of time worked by temporary employees and to divide this total by the normal number of man-hours worked by regular full-time employees. This can be done because of the fact that temporary employees are paid at regular statutory rates of pay and the total amounts paid to temporary employees of the different classes and wage-rate groups are matters of record. The number of regular clerks and supervisory employees in first-class and second-class offices increased from 28,211 in 1908 to 71,621 in 1931. The number of temporary employees, on an equivalent full-time, annual basis, increased from 365 in 1908 to 9,762 in 1931. The index of change for both groups combined runs from a base of 100.0 in 1908 to 288.5 in 1930, with a slight decline in 1931. The increase was mainly due to the expansion of the special services and of parcel-post mail. (See Tables 2 and 3.) For all groups in which there is an appreciable amount of temporary employment, the number of temporary employees has been reduced to an equivalent full-time annual basis. Clerks in the third and fourth class post offices are not included in the table, as they are not employees of the Government and are not ordinarily on a full-time basis.

The group of departmental employees, inspectors, and clerks at headquarters includes in general the employees at Washington and certain field agents with headquarters at Washington. Among these the number of temporary employees has been negligible. The total number of employees in this group increased from 1,741 in 1908 to 2,143 in 1931, with an index of 100.0 in the former and 123.1 in the latter year.

The Railway Mail Service, which in general has charge of the interoffice transfer, handling, and transportation of mail, employs principally the classes known as railway mail clerks and transfer clerks. In this general group there are no records of the number of temporary employees during the years 1908, 1910, and 1912. The total number of employees increased from 15,295 in 1908 to 23,065 in 1931, with the index changing from 100.0 to 150.8 in the same period.

City carriers increased, as indicated by Table 6, from 27,740 to 62,518. In this group, as in most others, there was a slight decline in 1931 from the number in 1930. The index of change runs from 100.0 in 1908 to 225.4 in 1931. The number of rural carriers increased from 40,479 to 44,672, the index rising from 100.0 to 110.4.

In regard to watchmen, messengers, and laborers in first and second class offices, official records fail to reveal the number of temporary employees during the years 1908 to 1912. The number was probably negligible because of the fact that work now done by temporary employees was then done largely by regular employees by means of longer hours, overtime, and Sunday work, without extra compensation. The total number of watchmen, messengers, and laborers in first and second class offices (including temporary employees on an equivalent annual basis from 1926 to 1931) increased from 1,072 in 1908 to 5,619 in 1931, the index rising from 100.0 to 524.2. This exceptionally large increase is due in part to the fact already mentioned, namely, the employment of temporary workers of this class to handle the extra work formerly done by regular employees, and in part to the relatively large amount of ordinary manual labor entailed by the Parcel Post System.

The grand total of these various groups of employees, including the temporary employees on an equivalent annual basis, increased from 177,469 in 1908 to 274,014 in 1930, from which high point it declined to 270,915 in 1931. The index of change runs from 100.0 in 1908 to 152.7 in 1931.

The increase in the number of employees included in Table 6 is unavoidably overestimated. During the years 1908, 1910, and 1912 most of the groups included in the table put in much overtime and Sunday work, and since they received no extra compensation for such work there is no means of computing the amount of extra time. On the basis of laws in operation during 1926 to 1931, much temporary labor was used and paid for at regular statutory rates, and, as stated above, it is therefore possible to calculate the temporary hire during these years on a full-time basis.

The effects of the laws mentioned above are indicated by a statement made in the annual report of the Post Office Department for 1908: "City carriers are limited by law to 8 hours' daily duty for the six working-days of the week and such number of hours on Sunday, not exceeding 8, as the exigencies of the service require. In the case of clerks, however, there is no statutory provision as to their hours of labor, and * * * it is not possible to fix an absolute 8-hour schedule for them without increasing the allowance for clerk hire far in excess of the needs of the office."

The reduction in the amount of Sunday work was initiated in 1910 at Detroit and gradually other offices, even without statutory sanction, followed the example of Detroit. In 1912 Congress passed a law, effective March 4, 1913, providing for a reduction in the amount of Sunday work and for compensatory time off duty for employees who were required to work on Sunday. The same law provided for 8 hours in 10 and no overtime except in case of emergency or if the needs of the service required it, and when overtime was exacted of employees, they were to receive extra compensation. The Postmaster General reported in 1913 that the readjustment of schedules necessitated by this law led to the use of a considerable amount of temporary labor. Later extensions and applications of the law materially increased the amount of temporary labor. It is apparent, therefore, that if the volume of employment in the form of overtime and Sunday work of the years 1908, 1910, and 1912 could be calculated on the same basis as has been done for the volume of auxiliary,

substitute, and other forms of temporary labor of the years 1926 to 1931, the estimate of the number of labor units for the earlier years would be considerably increased.

Incidentally, it may be said that during the years 1908, 1910, and 1912, when overtime and Sunday work were required without extra pay, there was probably a tendency on the part of the employees to speed up their work in order to reduce, as far as possible, the amount of Sunday work and overtime. This factor, although intangible and not subject to computation, probably accentuates the underestimate of the number of labor units for the years 1908, 1910, and 1912.

The various other groups of workers, both direct employees and those on a contractual basis, can not be reduced to an equivalent annual basis in terms of man-hours, but in respect to most of these groups the evidence indicates that there has been either a decline or a relatively small increase in number since 1908. One of the largest of these irregular groups consists of clerks in third-class and fourth-class offices. The decline in the number of smaller post offices has been accompanied by a decline in the amount of clerical assistance required, and the work formerly done by clerks in these offices is now done in part by employees in the groups included in Table 6, especially by rural carriers and by clerks in larger offices from which rural carriers operate. Another group of employees not appearing in Table 6 is composed of clerks in contract stations, i. e., branches of post offices, located usually in department stores and other private establishments. The clerical force of such stations are employed by the contractor. In 1908, there were 3,814 contract stations; in 1931, 5,783.

The amount of labor required for the transporting of mails is not included in Table 6 for the obvious reason that such labor is incidental in most cases to the general transportation of goods and passengers.

The local transfer or carriage of mails is usually a distinct operation handled by workers who confine their attention to this work while they are actually in charge of the mails, but the amount of time required per employee ranges from a few minutes per day to full-time employment. In 1908 the work was done almost entirely by employees of public carriers having mail contracts (especially the railroads) or by special contractors—mail messengers, screen-wagon contractors, regulation-wagon contractors, etc. In larger cities the transfer of mails was in part by pneumatic tubes operated on a contractual basis. In 1909 there were pneumatic tube routes in New York and Brooklyn, Chicago, Philadelphia, Boston, and St. Louis. The total mileage was 64.6086. Star route contractors formed a clearly distinct group to be discussed later.

Recently, and especially since 1920, when a ruling by the Inter-State Commerce Commission reinterpreted the obligations of public carriers, there has been a marked increase in the number of mail messengers. There has also been a tendency toward the employment of operators of Government-owned motor vehicles to take the place of employees of public carriers for the local handling of mails, especially between post offices and their branches and in connection with the delivery of parcel-post mail.

As early as 1907 an experimental collection service by automobiles was established in Milwaukee and it was reported that twice as many collections were made as by horse-drawn vehicles. Experiments were also made in other cities, the motor-vehicle operators being on

a contractual basis, as were operators of wagons. In 1911 it was reported by the Postmaster General that mail was being collected by automobiles in 15 cities, "and in practically every instance one carrier with an automobile will do the work of two carriers with horse-drawn vehicles." Government owned and operated motor-vehicle service was authorized in 1914 and was first established at Washington in the same year. By January 1, 1918, the service had been extended to New York and Brooklyn, Chicago, Philadelphia, Detroit, Boston, St. Louis, Pittsburgh, Indianapolis, Buffalo, and Nashville.

The local carriage of mails is thus a function performed in part by mail messengers and other special contractors; in part by employees of public carriers having mail contracts; and in part by Government employees operating motor vehicles. The relative numbers of the three classes have changed from time to time; but the ratio which the amount of labor required for performing this particular postal function bears to the total amount of labor represented in Table 6 may be assumed to have remained comparatively constant. The validity of Table 6, for the purpose of the present study, is therefore not affected by the omission of mail messengers, operators of Government motor vehicles, and other workers connected with the local carriage and transfer of mails.

An interesting group long connected with the postal system is the group known as "star-route carriers." These are almost entirely on a contractual basis. In 1908 there were 14,032 star routes, aggregating 182,287 miles in length. In 1931 there were 12,089 routes, with a total mileage of 226,370. It is apparent, therefore, that the star route service has tended to decline as far as the number of carriers is concerned. There is no means of knowing the average amount of time spent by star route contractors, but the decline in the number of routes, combined with improved roads and methods of transportation, indicates clearly a decrease in the total amount of labor by star route carriers. The decline has been accompanied by a transfer of their work to rural delivery carriers, who are included in Table 6. In 1931, for example, the work of 25 star routes was transferred to rural delivery carriers.

There is one other group of employees not included in Table 6—village delivery carriers. Village delivery service was not inaugurated until 1913. The number of carriers increased from 101 in 1913 to 859 in 1926, and thereafter tended to decline. This group of employees is not included in Table 6 because the work done by them represents an added service not rendered by the Post Office Department during the years 1908, 1910, and 1912. Since the service rendered by these employees does not appear in the computation of output for these years, obviously the labor units represented by village carriers should not be included in the estimate of volume of employment.

So large an organization as the postal system requires a vast amount of work by persons who are neither in the direct employ of the Post Office Department nor in a direct contractual relationship to the department. Such workers are generally, for obvious reasons, beyond the scope of the present study. But in this general classification there is one group which must be mentioned, although not included in the statistical analysis. This group consists of the employees of the post-office division of the General Accounting Office. This office is now an independent establishment. Its post-office

division now does substantially the same work as was formerly done by the Treasury Department's auditor for the Post Office Department.

In 1908 the office of the auditor for the Post Office Department had 756 employees. There was a gradual decline in number until in 1931 the post-office division of the General Accounting Office had only 452 employees. This reduction was caused in part by the transfer of some of the work (especially the punching of cards in field offices in connection with the electrical money-order accounting system). Certain other work has similarly been transferred to the employees of the Post Office Department. This means that the estimated number of employees as shown in Table 6 includes for the later years certain postal employees whose work was formerly done outside the Post Office Department and who therefore do not appear in the estimated number of employees for the earlier years. There is added reason, therefore, for the statement previously made, to the effect that the change in the volume of labor since 1908 has been appreciably smaller than is indicated by the figures in Table 6.

A more significant cause of the decline in the number of employees engaged in the final audit of the finances of the Post Office Department is to be found in the use of labor-saving devices such as the electrical accounting machinery connected with the money-order accounting system.

Changes in Number of Employment Opportunities

On the basis of the statistical data embodied in the preceding tables, it is possible to compute the changes in the productivity of labor and in the number of employment opportunities for the entire postal system for the years 1908, 1910, 1912, and 1926 to 1931. Such a computation is given in Table 7.

TABLE 7.—CHANGES IN NUMBER OF EMPLOYMENT OPPORTUNITIES IN THE POSTAL SERVICE IN SPECIFIED FISCAL YEARS

Fiscal year	Equivalent number of full-time employees [1]	Output			Number of employees necessary on basis of output in 1908	Employment opportunities lost	
		Total [2]	Average per employee			Number	Per cent
			Amount	Index numbers			
1908	177,469	14,567,706,216	82,086	100.0	177,469		
1910	186,399	16,857,974,685	90,440	110.2	205,370	18,971	9.2
1912	190,480	18,871,534,932	99,074	120.7	229,900	39,420	17.1
1926	258,960	35,558,568,500	137,313	167.3	433,187	174,227	40.2
1927	263,309	36,537,834,747	138,764	169.1	445,117	181,808	40.8
1928	266,559	36,802,638,640	138,066	168.2	448,342	181,783	40.5
1929	272,040	38,180,900,295	140,350	171.0	465,133	193,093	41.5
1930	274,014	38,632,716,968	140,988	171.8	470,637	196,623	41.8
1931	270,915	36,335,675,318	134,122	163.4	442,654	171,739	38.8

[1] See Table 6.
[2] Weighted number of pieces of mail handled (see Table 2), plus weighted number of special-service transactions (see Table 3.)

The average output per employee for the year 1908 was 82,086 units. This figure was derived by dividing 14,567,706,216, the total number of units of output, by 177,469, the total number of employees

(part-time employees being reduced to a full-time annual basis). If this average output per employee for 1908 had continued to be the average output per employee for the succeeding years included in Table 7, the number of employees during these succeeding years would have been much greater. By dividing the total number of units of output for each succeeding year by the average output per employee in 1908 we derive, for each succeeding year, the number of employees which would have been necessary if the average output per employee for each succeeding year had remained the same as in 1908. On the basis of this assumption the number of employees would have increased from 177,469 in 1908 to 229,900 in 1912; 433,187 in 1926; and 470,637 in 1930, from which high point the number would have declined to 442,654 in 1931.

In other words, these assumed numbers of employees, based on the average productivity per employee in 1908, are estimates of the number of employment opportunities which would have been available on the basis of the average output per employee in the earliest year studied.

By subtracting from these numbers based on the average output in 1908 the number of employees actually in the service of the postal system during each succeeding year included in the table, we arrive at the changes in the number of employment opportunities resulting from the technological changes which have been the principal causes of increased average output per employee. With the exception of the single year 1931, there has been a decline in the number of employment opportunities as compared with each preceding year included in Table 7.

The decrease in the number of employment opportunities in 1910 as compared with 1908 was 18,971; and in 1912, 39,420. From 1908 to 1926 the decrease amounted to 174,227, and the decline continued until 1930, in which year the number was 196,623.

On the basis of the average output in 1908, the decrease in the number of employment opportunities in 1931 was only 171,739. This relatively slight decrease as compared with 1930 is due not so much to a decline in average output per employee as to a decline in the total business handled.

These figures of decrease in the number of employment opportunities are presented in the form of per cents of decrease in the last column of Table 7. The decrease, which is in reality the extent of technological displacement, amounted to 9.2 per cent in 1910, as compared with 1908; to 17.1 per cent in 1912; and 40.2 per cent in 1926. From this point the per cent of decrease rose to 41.8 per cent in 1930 and declined to 38.8 per cent in 1931.

For reasons already indicated [6] and consisting essentially of the fact that the change in the volume of output is unavoidably underestimated and the change in the volume of labor overestimated, these estimates of the increase in the average output per employee and of decrease in the number of employment opportunities are conservative and do not indicate the full extent of the changes in question.

The estimates of displacement in Table 7 are based on the assumption that the services rendered by the postal system from 1908 to 1931 would have expanded substantially as indicated, even if the average output per employee had not materially increased. It is probable

[6] See pp. 753 and 756.

that in the case of the parcel-post business, expansion would have been somewhat smaller without an accompanying increase in the average output per employee. Without such an increase other agencies would probably have been able to absorb a portion of the parcel-post business. The extent to which the increased output of the postal system has depended on the increased productivity of labor is a problem which unfortunately resists solution in exact statistical form. It seems likely, however, that this factor, which would tend to reduce the per cent of decrease in the number of employment opportunities, is substantially counteracted by the decidedly conservative nature of the estimates in Table 7, due to the underestimate of increase in output and the overestimate of increase of labor units.

Trend of Employment

Several conditions have recently retarded the upturn of the productivity curve. With the growth of the Parcel Post System and of some of the special services, the lack of building facilities adapted to the use of improved methods has become increasingly restrictive of the efficiency of postal employees. The general decline of business has been accompanied by a large reduction in the amount of business handled by the post offices. This would have meant a decline in the average output per employee, even with drastically reduced labor forces. In many private enterprises there has been a curtailment of employment approximating the decline of output, but the Post Office Department has consistently avoided reducing its labor force to a minimum. The amount of part-time employment has been reduced and vacancies have rarely been filled, but the regular employees of the Post Office Department and of the individual post offices have enjoyed a relative security of tenure. This is based on generally accepted public policies of conserving the human assets as well as the physical plant and of maintaining a trained personnel regardless of temporary fluctuations in output. The policy has, however, adversely affected the average output per employee.

Assuming a return to business activity approximating that of the years immediately preceding 1929, there are several factors which indicate a decided upward trend of the curve of productivity and a corresponding downward trend of the curve of employment opportunities as measured by productivity when output returns to normal.

One of these factors is the new building program which is in an advanced stage and which will soon provide the principal cities of the country with facilities of the best available type. Equipment that has proved to be most efficient and most productive will be extended throughout the larger post offices of the country and will be operated in buildings especially designed for the use of such equipment.

Another factor operating in the same direction consists of the recent intensive study of labor management and administrative organization and methods. Surveys carried on between October, 1929, and April, 1931, in 55 of the largest offices of the country afford an outstanding illustration of the trend. The annual report of the Post Office Department for 1931 states that these surveys "indicate that an estimated annual saving of $4,500,000 will be effected when the ascertained surplus man-power can be absorbed through the policy of absorbing vacancies occurring in the service due to normal casualties such as deaths, retirements, resignations, or removals."

If a revival of business restores to the postal system a large and growing volume of output, the curve of average output per employee may be expected to rise rapidly. In other words, on the basis of production facilities afforded by the reconstructed physical plant and by the administrative reorganization of the system, the Post Office Department will be able to handle not only its former maximum production but a much larger output, with a smaller volume of labor than has previously been required.

If the smaller total output of 1931 should prove to be permanent or long-continued, the curve of average output per employee will naturally rise less rapidly and will depend on the relatively slow working out of the department's policy of allowing vacancies to remain unfilled and of taking up the slack by interior readjustments.

In either case (whether or not total output returns to its earlier high level) indications point to a resumption of the upward trend of the curve of output per employee; to a further decline of opportunities for employment in proportion to volume of output; and to a further increase in the volume of surplus man power attending the completion of the contemporary programs of construction and reorganization.

Relative Cost of Material and Labor in Building Construction, 1931–32

DURING the year 1928 the Bureau of Labor Statistics made a study of the relative cost of material and labor in building construction in the cities of Washington, D. C., Cincinnati, Ohio, and Decatur, Ill. The present study was made along the same lines, but covered 15 cities. The data relate for the most part to the years 1931 and 1932. Information was compiled from records kept by representative contractors in these 15 cities. The bureau's agents examined the records of the local building officials and from these records selected typical buildings in the residential and nonresidential groups. The requisite data relating to the labor and materials used on these projects were obtained from both the primary contractors and the subcontractors who did work on the buildings. Altogether information was obtained for 204 buildings.

In every city except Duluth data were obtained for 6 ordinary dwelling houses, 2 apartment houses, and 6 nonresidential buildings. In most cities the nonresidential quota consisted of 2 stores, 2 office buildings, and 2 factories or warehouses; when such were not obtainable substitutions were made of buildings as nearly like these as possible. Sufficient data for nonresidential buildings could not be obtained in Duluth.

The cost figures given in the present article represent only the actual cost of the building from the time excavation started. They do not include overhead expenses, profits, cost of land, finance charges, or architect's fees. The cost of material is its actual cost as delivered on the job, including freight and hauling. The labor costs are actual wages paid to labor on the job and do not include any shop labor, such as that involved in the making up of millwork, the cutting of stone at the quarries, or fabrication in the mills.

The buildings selected for the study were chosen from the types usually built in the cities selected. The bureau's agents received for the most part the fullest cooperation on the part of both contractors and subcontractors.

Relative Cost of Material and Labor in New Buildings

TABLE 1 shows the per cent that the cost of labor and of material each formed of the total cost of construction of residential and nonresidential buildings, in each of the 15 cities from which data were obtained, the weighted total of all buildings in each of these cities, and for the 15 cities combined. In this weighting the residential and nonresidential totals for a city were weighted by the proportional cost of such classes as shown by building permits issued in the city during 1931 and the first seven months of 1932.

TABLE 1.—PER CENT OF TOTAL COST OF CONSTRUCTION OF BUILDINGS CHARGEABLE TO LABOR AND MATERIAL IN 15 SPECIFIED CITIES

City	Per cent chargeable on—					
	Residential buildings		Nonresidential buildings		Both types	
	Material	Labor	Material	Labor	Material	Labor
Atlanta, Ga	70.1	29.9	71.4	28.6	71.0	29.0
Boston, Mass	56.9	43.1	59.8	40.2	59.0	41.0
Chicago, Ill	65.1	34.9	61.4	38.6	62.3	37.7
Dallas, Tex	74.0	26.0	72.1	27.9	72.8	27.2
Duluth, Minn	66.3	33.7	(1)	(1)		
Indianapolis, Ind	59.7	40.3	63.9	36.1	62.5	37.5
Little Rock, Ark	67.7	32.3	73.5	26.5	71.5	28.5
New Orleans, La	69.4	30.6	68.9	31.1	69.0	31.0
New York, N. Y	59.6	40.4	63.1	36.9	61.3	38.7
Roanoke, Va	64.1	35.9	67.0	33.0	65.9	34.1
Saginaw, Mich	66.5	33.5	64.8	35.2	65.3	34.7
St. Louis, Mo	63.0	37.0	64.1	35.9	63.7	36.3
Salt Lake City, Utah	65.6	34.4	65.6	34.4	65.6	34.4
Seattle, Wash	57.5	42.5	63.7	36.3	61.2	38.8
Trenton, N. J	59.0	41.0	62.8	37.2	62.2	37.8
All 15 cities combined	62.7	37.3	64.3	35.7	63.6	36.4

[1] Data for nonresidential building not obtained.

For the 15 cities taken as a whole, 63.6 per cent of the money spent in the erection of buildings went for material and 36.4 per cent for labor. The percentage received by labor was slightly higher on residential than on nonresidential buildings. Labor received a higher percentage of the total amount spent in building construction in Boston than in any other city. In Boston, 59 per cent of the cost of all kinds of buildings was accounted for by material and 41 per cent by labor. In contrast, in Dallas, labor received only 27.2 per cent of the total cost of building, while the expense for material accounted for 72.8 per cent of the total cost. In the North, in general, labor received a higher percentage of the total cost than in the South.

Table 2 shows a comparison in the proportion of the cost of building construction charged to labor and material in 3 cities in 1928, and in 15 cities in 1932.

TABLE 2.—PER CENT OF COST OF CONSTRUCTION OF BUILDINGS CHARGEABLE TO LABOR AND MATERIALS IN 3 CITIES IN 1928 AND IN 15 CITIES IN 1932

Type of building	Per cent of total construction cost chargeable in—			
	3 cities, 1928		15 cities, 1932	
	Material	Labor	Material	Labor
Residential buildings	54.0	46.0	62.7	37.3
Nonresidential buildings	61.7	38.3	64.3	35.7
Total, weighted	58.1	41.8	63.6	36.4

In the 3 cities (Cincinnati, Washington, and Decatur, Ill.) for which data were received in 1928, labor cost 41.8 per cent and material 58.1 per cent. In 1932, however, according to data collected in 15 cities, labor received only 36.4 per cent, while material cost 63.6 per

cent. There was a very small decrease in the percentage of the total cost of building construction received by labor in nonresidential building, comparing the data for the two years. In the cost of residential building, however, labor's proportion was much lower in 1932 than in 1928, i. e., 37.3 per cent as against 46 per cent. Whether this was caused by the difference in cities, lowering of wages, increased efficiency of labor, or the use of more expensive materials, or a combination of all four, it is impossible to state.

Table 3 shows the highest and lowest percentage of labor and material costs for individual residential and nonresidential buildings, by cities.

TABLE 3.—HIGHEST AND LOWEST PERCENTAGE OF LABOR AND MATERIAL COSTS FOR INDIVIDUAL BUILDINGS, 1932, BY CITIES

City	Residential buildings				Nonresidential buildings			
	Material cost		Labor cost		Material cost		Labor cost	
	Highest percentage	Lowest percentage	Highest percentage	Lowest percentage	Highest percentage	Lowest percentage	Highest percentage	Lowest percentage
Atlanta, Ga	73.8	63.5	36.5	26.2	78.8	62.8	37.2	21.2
Boston, Mass	60.9	43.8	56.2	39.1	62.1	55.1	44.9	37.9
Chicago, Ill	65.9	60.3	39.7	34.1	67.5	54.2	45.8	32.5
Dallas, Tex	80.2	68.8	31.2	19.8	74.8	66.8	33.2	25.2
Duluth, Minn	70.1	62.3	37.7	29.9				
Indianapolis, Ind	72.3	56.3	43.7	27.7	67.7	61.5	38.5	32.3
Little Rock, Ark	71.2	62.3	37.7	28.8	78.5	69.1	30.9	21.5
New Orleans, La	73.1	60.8	39.2	26.9	75.1	61.0	39.0	24.9
New York, N. Y	67.8	57.2	42.8	32.2	66.3	52.9	47.1	33.7
Roanoke, Va	69.3	59.6	40.4	30.7	71.3	61.4	38.6	28.7
Saginaw, Mich	67.8	54.1	45.9	32.2	71.4	55.6	44.4	28.6
St. Louis, Mo	70.4	55.7	44.3	29.6	70.4	57.4	42.6	29.6
Salt Lake City, Utah	67.9	61.8	38.2	32.1	70.4	63.2	36.8	29.6
Seattle, Wash	68.5	55.5	44.5	31.5	65.5	58.9	41.1	34.5
Trenton, N. J	62.7	52.4	47.6	37.3	64.7	54.2	45.8	35.3

It was found that the proportion of labor and material costs varied considerably on different buildings within each city. For example, in New York City the highest proportionate labor cost on any residential building was 42.8 per cent, and the lowest 32.2, while the highest labor cost on any nonresidential building was 47.1 per cent, and the lowest 33.7. In Indianapolis one residential building had a labor cost of 43.7 per cent, while another had a labor cost of only 27.7 per cent.

The highest proportion of the total expenditures going for material on any one residential building occurred in Dallas, where on one building 80.2 per cent of the total cost was accounted for by the material used. The lowest percentage spent for material occurred in Boston, where on one residential building the cost of material was only 43.8 of the total cost; the highest labor cost in the same class of building also was found in Boston where on one building 56.2 per cent of the total costs was accounted for by labor on the job.

In nonresidential building, the highest percentage chargeable to material on an individual building occurred in Atlanta, Ga., and the lowest in New York City. The highest labor percentage on an individual building in the nonresidential group occurred in New York and the lowest in Atlanta.

Relative Material and Labor Cost for Each Class of Work Done

TABLE 4 shows the percentage of material cost and labor cost of the different classes of work entering into the erection of residential and nonresidential buildings in each of the cities from which data were received and in all 15 cities combined.

TABLE 4.—PER CENT OF SPECIFIED CLASS OF CONSTRUCTION WORK CHARGEABLE TO LABOR AND MATERIAL, BY CITIES

Residential buildings

Class of work	Per cent chargeable in—							
	Atlanta, Ga.		Boston, Mass.		Chicago, Ill.		Dallas, Tex.	
	Material	Labor	Material	Labor	Material	Labor	Material	Labor
Excavating and grading	------	100.0	3.9	96.1	------	100.0	------	100.0
Brickwork	68.8	31.2	54.2	45.8	64.8	35.2	67.2	32.8
Carpenter work (builders' hardware, lumber, and millwork)	68.8	31.2	62.4	37.6	72.9	27.1	78.4	21.6
Tile work	74.2	25.8	49.0	51.0	55.0	45.0	67.7	32.3
Concrete work	69.8	30.2	54.0	46.0	66.8	33.2	68.6	31.4
Electric wiring and fixtures	81.2	18.8	58.2	41.8	66.5	33.5	73.9	26.1
Plumbing	79.0	21.0	78.5	21.5	76.1	23.9	82.9	17.1
Heating and ventilating	81.4	18.6	71.7	28.3	81.8	18.2	77.7	22.3
Painting	56.0	44.0	30.7	69.3	26.9	73.1	55.3	44.7
Papering	42.2	57.8	40.5	59.5	33.1	66.9	48.1	51.9
Plastering	66.9	33.1	29.5	70.5	32.1	67.9	------	------
Roofing	69.6	30.4	62.6	37.4	62.2	37.8	75.8	24.2
Miscellaneous	------	------	66.6	33.4	75.6	24.4	80.9	19.1
	Duluth, Minn.		Indianapolis, Ind.		Little Rock, Ark.		New Orleans, La.	
Excavating and grading	7.8	92.2	------	100.0	------	100.0	------	100.0
Brickwork	63.0	37.0	54.5	45.5	72.0	28.0	52.9	47.1
Carpenter work (builders' hardware, lumber, and millwork)	73.8	26.2	75.9	24.1	68.1	31.9	74.8	25.2
Tile work	59.7	40.3	61.0	39.0	64.0	36.0	58.2	41.8
Concrete work	60.3	39.7	52.0	48.0	69.2	30.8	74.3	25.7
Electric wiring and fixtures	65.3	34.7	61.6	38.4	71.0	29.0	48.7	51.3
Plumbing	75.1	24.9	75.8	24.2	76.9	23.1	80.5	19.5
Heating and ventilating	78.6	21.4	75.9	24.1	76.6	23.4	85.8	14.2
Painting	30.6	69.4	29.4	70.6	44.3	55.7	44.1	55.9
Papering	------	------	40.9	59.1	------	------	------	------
Plastering	54.1	45.9	26.8	73.2	59.4	40.6	48.7	51.3
Roofing	65.1	34.9	70.1	29.9	77.2	22.8	77.8	22.2
Miscellaneous	76.9	23.1	60.8	39.2	------	------	85.6	14.4
	New York, N. Y.		Roanoke, Va.		Saginaw, Mich.		St. Louis, Mo.	
Excavating and grading	------	100.0	11.0	89.0	------	100.0	------	100.0
Brickwork	55.2	44.8	53.5	46.5	46.3	53.7	64.8	35.2
Carpenter work (builders' hardware, lumber, and millwork)	70.7	29.3	61.9	38.1	72.9	27.1	62.0	38.0
Tile work	46.9	53.1	61.0	39.0	67.4	32.6	59.3	40.7
Concrete work	52.9	47.1	61.7	38.3	56.2	43.8	58.6	41.4
Electric wiring and fixtures	54.2	45.8	72.6	27.4	72.4	27.6	66.0	34.0
Plumbing	75.0	25.0	75.4	24.6	74.7	25.3	75.3	24.7
Heating and ventilating	74.2	25.8	83.4	16.6	82.7	17.3	79.9	20.1
Painting	28.6	71.4	31.0	69.0	36.0	64.0	32.3	67.7
Papering	------	------	------	------	------	------	------	------
Plastering	56.5	43.5	60.7	39.3	54.2	45.8	46.4	53.6
Roofing	64.2	35.8	78.0	22.0	67.5	32.5	75.9	24.1
Miscellaneous	75.2	24.8	------	------	83.2	16.8	87.4	12.6
	Salt Lake City, Utah		Seattle, Wash.		Trenton, N. J.		All 15 cities combined	
Excavating and grading	------	100.0	4.3	95.7	1.0	99.0	1.5	98.5
Brickwork	61.7	38.3	58.3	41.7	55.9	44.1	58.4	41.6
Carpenter work (builders' hardware, lumber, and millwork)	66.1	33.9	43.5	56.5	62.7	37.3	67.1	32.9
Tile work	60.8	39.2	58.6	41.4	59.2	40.8	56.0	44.0
Concrete work	61.9	38.1	67.5	32.5	48.1	51.9	63.5	36.5
Electric wiring and fixtures	80.0	20.0	55.1	44.9	72.3	27.7	64.0	36.0
Plumbing	79.8	20.2	69.7	30.3	73.7	26.3	75.3	24.7
Heating and ventilating	78.9	21.1	81.6	18.4	76.8	23.2	79.7	20.3
Painting	49.5	50.5	36.2	63.8	27.7	72.3	33.4	66.6
Papering	58.2	41.8	------	------	45.5	54.5	38.5	61.5
Plastering	47.2	52.8	40.4	59.6	42.1	57.9	44.6	55.4
Roofing	81.4	18.6	48.9	51.1	67.8	32.2	67.7	32.3
Miscellaneous	------	------	79.4	20.6	82.2	17.8	75.2	24.8

TABLE 4.—PER CENT OF SPECIFIED CLASS OF CONSTRUCTION WORK CHARGEABLE TO LABOR AND MATERIAL, BY CITIES—Continued

Nonresidential buildings

Class of work	Per cent chargeable in—							
	Atlanta, Ga.		Boston, Mass.		Chicago, Ill.		Dallas, Tex.	
	Material	Labor	Material	Labor	Material	Labor	Material	Labor
Excavating and grading	18.3	81.7	0.6	99.4	16.3	83.7	-------	100.0
Brickwork	67.9	32.1	56.8	43.2	60.1	39.9	72.4	27.6
Carpenter work (builders' hardware, lumber, and millwork)	69.4	30.6	35.9	64.1	64.0	36.0	78.8	21.2
Tile work	63.2	36.8	45.1	54.9	53.5	46.5	58.4	41.6
Concrete work	67.3	32.7	61.4	38.6	63.0	37.0	61.8	38.2
Structural steel	80.3	19.7	75.1	24.9	79.6	20.4	82.6	17.4
Electric wiring and fixtures	65.0	35.0	63.1	36.9	58.2	41.8	76.2	23.8
Heating and ventilating	82.1	17.9	69.9	30.1	69.2	30.8	71.8	28.2
Plumbing	76.0	24.0	68.7	31.3	65.8	34.2	74.7	25.3
Plastering	45.4	54.6	23.4	76.6	33.3	66.7	33.1	66.9
Painting	39.4	60.6	21.5	78.5	35.0	65.0	49.1	50.9
Roofing	67.3	32.7	66.1	33.9	68.7	31.3	70.8	29.2
Glass and glazing	68.0	32.0	74.5	25.5	71.8	28.2	78.8	21.2
Elevators	89.1	10.9	84.7	15.3	80.5	19.5	86.0	14.0
Miscellaneous	91.1	8.9	80.3	19.7	69.8	30.2	87.2	12.8
	Indianapolis, Ind.		Little Rock, Ark.		New Orleans, La.		New York, N. Y.	
Excavating and grading	-------	100.0	-------	100.0	61.0	39.0	1.4	98.6
Brickwork	62.3	37.7	76.2	23.8	62.0	38.0	60.3	39.7
Carpenter work (builders' hardware, lumber, and millwork)	73.2	26.8	69.7	30.3	62.1	37.9	49.1	50.9
Tile work	56.5	43.5	70.7	29.3	57.9	42.1	49.6	50.4
Concrete work	56.0	44.0	75.6	24.4	74.4	25.6	50.6	49.4
Structural steel	72.1	27.9	88.3	11.7	82.1	17.9	83.6	16.4
Electric wiring and fixtures	63.3	36.7	65.4	34.6	80.3	19.7	55.3	44.7
Heating and ventilating	75.6	24.4	74.4	25.6	87.7	12.3	67.4	32.6
Plumbing	67.8	32.2	73.4	26.6	78.5	21.5	69.5	30.5
Plastering	31.3	68.7	62.7	37.3	43.2	56.8	28.0	72.0
Painting	25.3	74.7	47.2	52.8	27.4	72.6	32.8	67.2
Roofing	70.0	30.0	81.7	18.3	75.8	24.2	67.9	32.1
Glass and glazing	79.6	20.4	71.9	28.1	81.2	18.8	84.3	15.7
Elevators	82.3	17.7	-------	-------	83.5	16.5	78.3	21.7
Miscellaneous	82.1	17.9	90.0	10.0	88.4	11.6	74.4	25.6
	Roanoke, Va.		Saginaw, Mich.		St. Louis, Mo.		Salt Lake City, Utah	
Excavating and grading	23.1	76.9	7.0	93.0	7.1	92.9	-------	100.0
Brickwork	60.2	39.8	55.9	44.1	67.8	32.2	59.3	40.7
Carpenter work (builders' hardware, lumber, and millwork)	52.1	47.9	57.1	42.9	66.5	33.5	56.1	43.9
Tile work	74.5	25.5	51.1	48.9	49.6	50.4	64.5	35.5
Concrete work	59.2	40.8	49.9	50.1	60.0	40.0	63.6	36.4
Structural steel	80.2	19.8	78.7	21.3	80.8	19.2	91.3	8.7
Electric wiring and fixtures	82.0	18.0	66.4	33.6	63.5	36.5	75.2	24.8
Heating and ventilating	84.0	16.0	81.8	18.2	74.2	25.8	84.3	15.7
Plumbing	83.7	16.3	74.4	25.6	61.3	38.7	80.9	19.1
Plastering	48.0	52.0	51.8	48.2	32.7	67.3	54.1	45.9
Painting	38.2	61.8	26.9	73.1	30.9	69.1	38.4	61.6
Roofing	75.9	24.1	75.4	24.6	73.0	27.0	79.9	20.1
Glass and glazing	79.6	20.4	84.0	16.0	73.0	27.0	84.4	15.6
Elevators	76.0	24.0	89.3	10.7	74.5	25.5	87.7	12.3
Miscellaneous	85.5	14.5	78.8	21.2	81.8	18.2	67.5	32.5

TABLE 4.—PER CENT OF SPECIFIED CLASS OF CONSTRUCTION WORK CHARGEABLE TO LABOR AND MATERIAL, BY CITIES—Continued

Nonresidental buildings—Continued

Class of work	Per cent chargeable in—					
	Seattle, Wash.		Trenton, N. J.		All 14 cities combined	
	Material	Labor	Material	Labor	Material	Labor
Excavating and grading	25.2	74.8	34.7	65.3	14.5	85.5
Brickwork	67.8	32.2	61.4	38.6	63.3	36.7
Carpenter work (builders' hardware, lumber, and millwork)	66.8	33.2	72.5	27.5	62.8	37.2
Tile work	50.7	49.3	49.2	50.8	52.8	47.2
Concrete work	58.7	41.3	43.3	56.7	58.4	41.6
Structural steel	84.3	15.7	81.3	18.7	81.2	18.8
Electric wiring and fixtures	62.7	37.3	60.2	39.8	63.9	36.1
Heating and ventilating	81.4	18.6	66.5	33.5	73.5	26.5
Plumbing	65.8	34.2	57.7	42.3	67.8	32.2
Plastering	35.5	64.5	32.8	67.2	33.7	66.3
Painting	30.9	69.1	22.1	77.9	32.8	67.2
Roofing	70.0	30.0	69.1	30.9	70.7	29.3
Glass and glazing	89.8	10.2	73.6	26.4	80.1	19.9
Elevators	85.1	14.9	78.5	21.5	80.6	19.4
Miscellaneous	52.2	47.8	84.2	15.8	76.7	23.3

Taking the 15 cities as a whole, material forms a larger percentage of the total cost of residential building than labor in all classes of work except excavation and grading, painting, papering, and plastering. The largest labor cost on any individual item, was in excavating and grading, where 98.5 per cent of the total cost went for labor. Heating showed the lowest relative labor cost, 20.3 per cent. In Atlanta, Ga., with the exception of excavating and grading and papering, material accounted for a higher percentage of the total cost than labor in all items. In Boston, there were five items in which the labor cost was higher than the material cost. In Little Rock, the cost of the material accounted for 72 per cent of the total cost of brickwork, while in Saginaw, only 46.3 per cent of the total cost of brickwork was accounted for by material. There was also a great contrast in the proportion of material and labor cost comparing several other items in the different cities. For example, in New Orleans, 74.3 per cent of the total cost of the concrete work was for material and only 25.7 per cent for labor. In Boston, however, only 54 per cent of the total cost of concrete work went for material and 46 per cent for labor.

In a number of items there was very little difference in the proportion of material and labor cost in the different cities. For example, for plumbing in Dallas, Tex., where material accounted for a larger proportion of the total cost than any other city, 82.9 per cent of the total plumbing cost went for material, and 17.1 per cent, for labor; while Seattle was the only city where the cost of material formed less than 70 per cent of the total plumbing cost. In contrast, the labor percentage of the total cost of plastering ranged from 33.1 in Atlanta to 73.2 in Indianapolis.

As regards nonresidential buildings, in all cities combined, the only items in which labor formed a higher cost than material in nonresidential buildings, were excavating and grading, plastering, and painting. The highest labor percentage in any single item was 85.5 in the

case of excavating and grading. In structural-steel work, in contrast, the percentage of total cost going to labor was only 18.8 while the material cost was 81.2. In glass and glazing and elevators, the material cost formed more than 80 per cent of the total cost of material and labor combined.

How the Building Dollar Goes

TABLE 5 shows the percentage that the cost of each class of work in building forms of the total cost of residential building in each of the cities and for all 15 cities combined. These figures include both labor and material.

TABLE 5.—PERCENTAGE THAT COST OF EACH CLASS OF WORK FORMS OF TOTAL COST OF RESIDENTIAL BUILDINGS, BY CITIES

[These figures include material and labor]

Class of work	Per cent of total cost chargeable to specified class of work in—							
	Atlanta, Ga.	Boston, Mass.	Chicago, Ill.	Dallas, Tex.	Duluth, Minn.	Indianapolis, Ind.	Little Rock, Ark.	New Orleans, La.
Excavating and grading	1.3	1.6	0.3	0.9	2.3	0.9	1.0	0.5
Brickwork	10.3	13.9	15.4	7.1	9.6	17.6	14.4	7.1
Carpenter work	44.2	27.4	17.2	52.9	41.0	23.6	45.1	39.7
Tile work	3.2	4.6	3.8	2.9	1.7	3.4	1.9	4.3
Concrete work	4.2	4.8	22.1	5.1	8.3	13.3	4.8	6.6
Electric wiring and fixtures	4.6	3.8	5.0	4.7	2.7	2.8	3.6	5.1
Heating and ventilating	8.8	6.9	5.9	1.0	9.0	6.0	1.2	8.5
Plumbing	9.5	9.6	10.3	11.4	9.0	9.6	11.1	12.0
Plastering and lathing	5.6	9.5	7.6	-------	6.9	8.7	7.9	6.1
Painting	4.4	5.2	3.1	9.6	5.4	4.0	4.8	5.6
Papering	0.3	0.4	1.4	0.3	-------	0.3	-------	-------
Roofing	3.5	2.1	0.4	3.4	2.8	1.1	4.1	4.1
Miscellaneous	-------	10.2	7.7	0.7	1.2	8.6	-------	0.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Class of work	New York, N. Y.	Roanoke, Va.	Saginaw, Mich.	St. Louis, Mo.	Salt Lake City, Utah	Seattle, Wash.	Trenton, N. J.	All 15 cities combined
Excavating and grading	2.9	1.3	0.6	0.9	1.5	1.4	1.7	1.3
Brickwork	22.7	9.3	11.5	20.3	14.0	6.9	21.4	14.8
Carpenter work	23.5	41.5	40.2	28.1	32.9	26.4	28.2	27.3
Tile work	4.1	1.2	2.9	3.8	4.5	3.2	3.3	3.5
Concrete work	5.5	5.2	4.5	10.8	8.1	15.6	5.8	11.7
Electric wiring and fixtures	4.0	4.5	6.7	3.7	4.8	4.7	2.7	4.5
Heating and ventilating	4.8	9.9	7.7	6.2	9.5	7.1	9.6	6.6
Plumbing	9.7	10.2	9.6	10.2	10.0	10.9	8.5	10.1
Plastering and lathing	12.6	6.8	5.6	7.0	6.2	7.8	8.9	8.2
Painting	4.4	4.0	5.5	3.8	3.5	4.3	4.0	4.2
Papering	-------	-------	-------	-------	2.8	-------	0.1	0.5
Roofing	1.5	6.1	2.2	2.2	2.1	1.5	4.4	1.8
Miscellaneous	4.3	-------	3.0	3.0	-------	10.1	1.4	5.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

In these 15 cities, carpentry work accounted for a larger percentage of the building dollar than any other items in residential building—27.3 cents of each dollar spent—while papering accounted for the smallest portion—five-tenths of 1 cent. In Dallas, Tex., and Little Rock, Ark., low heating costs are accounted for by the fact that most residences do not have a central heating plant; stoves burning

natural gas are used generally. In addition to carpentry work, three other items each accounted for more than 10 cents of each dollar spent; they were brickwork, concrete work, and plumbing. In each of the 15 cities, except Chicago, carpentry work formed the largest single item of expense in residential building. In Chicago, concrete work accounted for a larger portion of the building dollar than carpentry work.

Table 6 shows the percentage that the cost of each class of work forms of the total cost of nonresidential building.

TABLE 6.—PERCENTAGE THAT COST OF EACH CLASS OF WORK FORMS OF TOTAL COST OF NONRESIDENTIAL BUILDINGS, BY CITIES

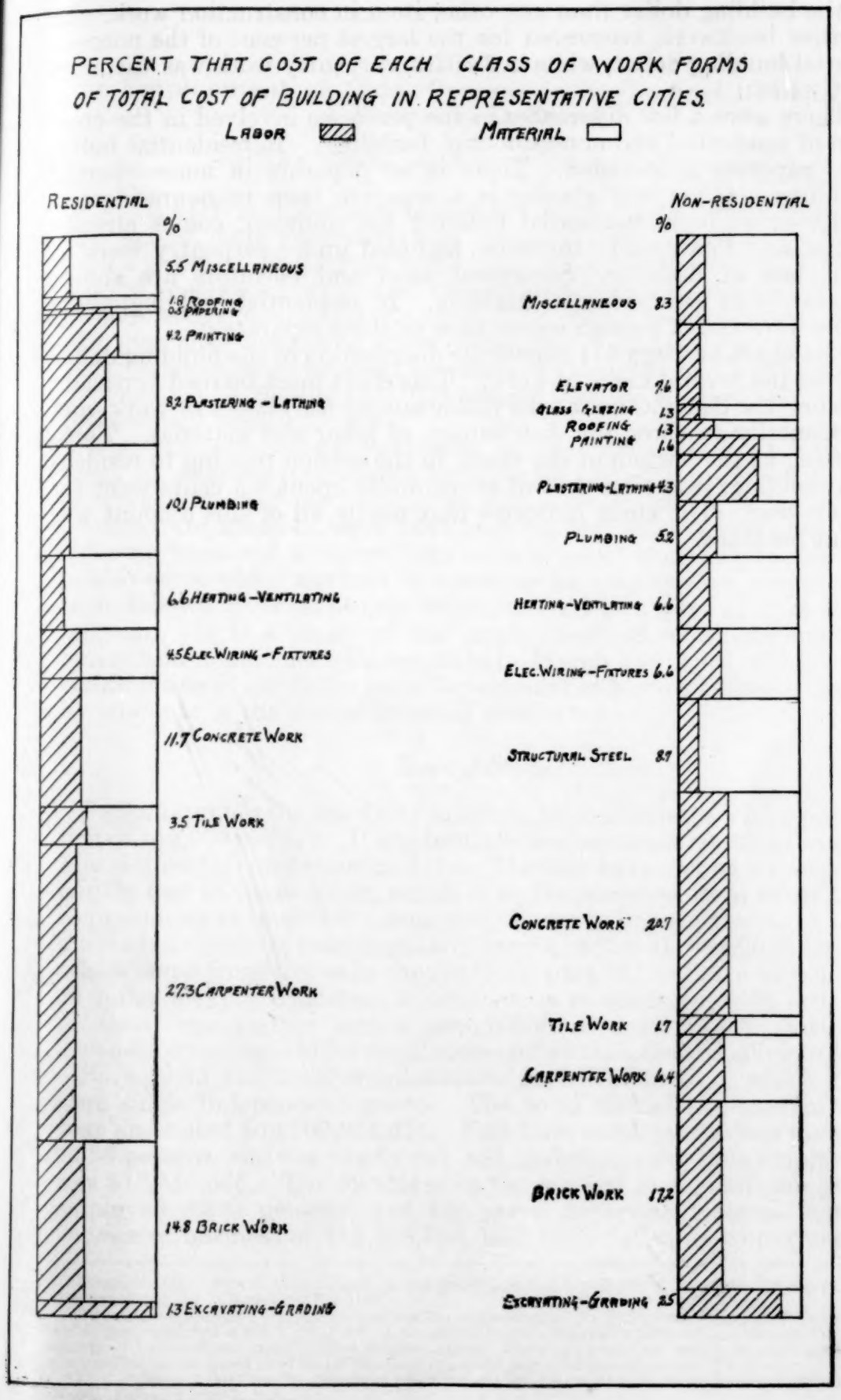
[These figures include material and labor]

Class of work	Per cent of total cost chargeable to specified class of work in—							
	Atlanta, Ga.	Boston, Mass.	Chicago, Ill.	Dallas, Tex.	Indianapolis, Ind.	Little Rock, Ark.	New Orleans, La.	New York, N. Y.
Excavating and grading	1.4	2.6	3.6	2.0	0.7	1.4	5.2	2.6
Brickwork	17.3	18.9	13.2	18.7	21.0	24.0	12.2	20.7
Carpenter work	5.6	6.8	8.9	10.4	8.2	24.6	17.4	1.7
Tile work	2.1	2.4	4.0	2.1	3.4	0.3	2.5	1.3
Concrete work	21.9	16.4	22.3	9.4	19.3	16.1	13.6	15.7
Structural steel	11.9	11.1	4.4	13.5	1.4	6.5	6.8	13.4
Electric wiring and fixtures	5.4	8.3	6.1	6.8	4.8	1.2	6.9	5.2
Heating and ventilating	4.8	7.7	11.0	4.1	7.6	0.2	7.4	5.8
Plumbing	5.9	4.1	5.2	4.7	7.5	1.6	5.9	6.1
Plastering and lathing	4.3	4.4	4.0	4.5	6.6	6.4	8.9	3.7
Painting	1.7	2.0	2.2	3.9	1.2	2.9	2.1	0.8
Roofing	1.9	1.2	3.0	0.4	1.1	7.5	4.4	1.0
Glass and glazing	0.6	1.1	1.0	1.4	1.7	1.7	1.3	1.0
Elevators	8.2	2.8	2.9	10.8	6.8	-------	1.2	12.5
Miscellaneous	6.9	10.4	8.2	7.4	8.7	5.6	4.2	8.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Class of work	Roanoke, Va.	Saginaw, Mich.	St. Louis, Mo.	Salt Lake City, Utah	Seattle, Wash.	Trenton, N. J.	All 14 cities combined
Excavating and grading	4.4	2.1	1.9	2.7	2.5	4.2	2.5
Brickwork	17.5	16.1	13.4	11.3	14.7	24.0	17.2
Carpenter work	5.9	10.0	4.4	25.3	10.2	4.1	6.4
Tile work	1.5	1.6	0.8	0.8	1.2	1.8	1.7
Concrete work	22.1	14.0	32.4	15.4	25.4	11.2	20.7
Structural steel	9.0	8.1	6.3	5.9	2.5	13.1	8.7
Electric wiring and fixtures	6.9	5.8	9.4	7.8	5.7	3.7	6.6
Heating and ventilating	4.5	8.6	6.3	6.8	6.3	9.4	6.6
Plumbing	2.8	5.0	5.2	6.9	4.4	4.9	5.2
Plastering and lathing	4.1	4.6	3.5	4.5	4.9	4.5	4.3
Painting	1.0	1.6	1.3	2.5	1.8	1.8	1.6
Roofing	1.3	3.4	0.6	3.4	1.1	1.4	1.3
Glass and glazing	1.2	1.8	1.3	3.4	2.0	0.6	1.3
Elevators	3.4	6.2	7.2	3.0	9.5	2.5	7.6
Miscellaneous	14.4	11.0	5.9	0.3	7.8	12.6	8.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

For nonresidential building, concrete work accounted for the largest portion of the building dollar, 20.7 cents going for this class of work. Brickwork was the only other item accounting for more than 10 cents per dollar. Roofing and glass and glazing, each accounted for 1.3 cents of each dollar, thus tying for the low place in the list.

In 5 of the 14 cities from which data were collected, concerning nonresidential building, concrete work accounted for a larger portion


PERCENT THAT COST OF EACH CLASS OF WORK FORMS OF TOTAL COST OF BUILDING IN REPRESENTATIVE CITIES.
LABOR
MATERIAL
RESIDENTIAL
%
5.5 MISCELLANEOUS
1.8 ROOFING
0.5 PAPERING
4.2 PAINTING
8.2 PLASTERING - LATHING
10.1 PLUMBING
6.6 HEATING - VENTILATING
4.5 ELEC. WIRING - FIXTURES
11.7 CONCRETE WORK
3.5 TILE WORK
27.3 CARPENTER WORK
14.8 BRICK WORK
1.3 EXCAVATING - GRADING
NON-RESIDENTIAL
%
MISCELLANEOUS 8.3
ELEVATOR 7.6
GLASS GLAZING 1.3
ROOFING 1.3
PAINTING 1.6
PLASTERING-LATHING 4.3
PLUMBING 5.2
HEATING-VENTILATING 6.6
ELEC. WIRING-FIXTURES 6.6
STRUCTURAL STEEL 8.7
CONCRETE WORK 20.7
TILE WORK 1.7
CARPENTER WORK 6.4
BRICK WORK 17.2
EXCAVATING-GRADING 2.5

of the building dollar than any other item in construction work. In 6 cities brickwork accounted for the largest per cent of the nonresidential building dollar, while in 3 cities, carpentry work was the most costly item.

There were a few differences in the processes involved in the erection of residential and nonresidential buildings. In residential building, papering is included. There is no papering in nonresidential buildings. Glass and glazing is a separate item in nonresidential building, while in residential building the millwork comes already glazed and this item is, therefore, included under carpentry work in this class of building. Structural steel and elevators are shown separately in nonresidential building. In residential building, these items were not of enough importance to show separately.

The chart on page 771 shows the distribution of the building dollar among the several kinds of work. This chart must be read vertically to show the distribution of the dollar among the classes of work, and horizontally to show the distribution of labor and material. Thus, starting at the bottom of the chart, in the section relating to residential building, it is seen that of every dollar spent 1.3 cents went for excavating. The chart indicates that nearly all of this amount was spent for labor.

Employment of Older Persons in Springfield, Mass., Department Stores

By Amy Hewes, of Mount Holyoke College

IN TRADE and industry to-day the fear of losing one's place to a younger, more vigorous person harasses many a worker even before youth is past. Employees know that the older workers will be the ones to go when a reduction of the working force is necessary and they often lose confidence and put more effort into concealing their actual age than into increasing their efficiency. The management, on its side, balances years of loyal service and the advantages of low turnover against decreasing output, knowing that the time will come when replacement must be made.

The Massachusetts Commission on the Stabilization of Employment, in planning its research program for 1931–32, proposed a study of workers in various lines of employment in which it hoped "to demonstrate kinds of work that may be performed satisfactorily by older workers, and to throw light upon types of work experience that enable some older workers to continue in employment longer than their fellows."[1] The project here reported is a part of that larger program. It is a study of the employment of older employees in Springfield department stores made in March and April, 1932, under the direction of the Economics Department at Mount Holyoke College by students in the course in social statistics.[2]

Scope of Study

SPRINGFIELD is the third city in size in Massachusetts, with a population of 149,900 in 1930. It has been the leading trade center of western Massachusetts since colonial days. The city has enjoyed a prosperity largely due to its location, which is so far removed from other large communities as to give it a monopoly in many lines of trade. A large number of shoppers come regularly from a radius of over 20 miles, and others come from towns in the northern part of the State as much as 50 miles away. Chicopee, a contiguous community with separate political organization and a population of over 43,000, virtually depends on Springfield for retail stores other than those dealing in food.

Springfield had 2,220 retail establishments in 1930, of which 1,711 were single independent stores. The total annual turnover in that year amounted to $109,054,926. Full-time employment was given to 9,528 persons, and the yearly pay roll, including part-time employees, was $13,558,565. The 69 stores in the general merchandising group employed 2,393 persons; and the seven department stores, with a volume of business of $15,748,793, had 1,970 full-time employees.[3]

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[1] Massachusetts. Special Commission on the Stabilization of Employment. Preliminary report, 1932. Boston, 1931, p. 14. (House bill No. 1100.)

[2] The data were secured through the cooperation and interest of the Springfield Chamber of Commerce, and in particular that of Mr. T. M. Johnson, the secretary of its Merchants' Bureau; and through the assistance given by the management of the Springfield stores. The study would not have been possible without the untiring patience and good will of the directors of the personnel departments of the stores.

[3] U. S. Bureau of the Census. Census of Distribution: Preliminary report of retail trade in Springfield, Mass. Released May 2, 1931.

The three stores chosen for this study are the largest in the department-store group. They have long been established in the city of Springfield. One of them opened for business in 1874, one in 1875, and the third in 1906. All are independent units, general department stores, and handle merchandise of about the same grade.

During the latter part of the depression period, when the reduced volume of trade made it impossible to carry the whole force on full time, part-time employment and "vacations" rather than dismissals were resorted to by all of these stores. All three carried smaller numbers on their pay rolls in 1931 than in 1930. The decrease in the average number employed varied from 5 to 11 per cent in the three stores. Although the numbers employed were consistently smaller in 1931, the spread was greatest during the earlier part of the year and continued through the Easter trade. This trade, together with that of the Christmas holidays showed the peaks characteristic of those periods almost everywhere.

The group studied included all of the employees over 45 years of age on the pay rolls of the three stores, a total of 344. Detailed information was secured through personal interviews with 241 of these employees. The number seen individually amounted to more than four-fifths of the age group in two of the stores, but in the case of the third, to only slightly more than half. The interviews were arranged by the personnel departments and took place in the stores during the day.

Character of Group Studied

Proportion of Older Workers

THERE is no "old age at forty" among retail-store employees. None of the managements would admit there was any dead line of employability. The proportion of older workers was larger than would be found in almost any manufacturing establishment, an indication that a longer earning life characterizes mercantile employment.

From one-fourth to one-fifth of the total staff in each of these stores was composed of persons over 45. Although the total percentage of older workers in each of the stores was approximately the same, the composition of these older groups differed as to sex. Women were in the majority in the total force of all the stores, but over one-half of the older employees in one establishment were men. In the other stores men were respectively one-third and two-fifths of the older group.

Age

Although the largest group of older employees who were interviewed was made up of persons between 45 and 50, this group formed less than one-third (30.7 per cent) of the whole number. A fourth of the total were between 50 and 55, and nearly one-fourth (23 per cent) were over 60 years.

Probably among the employees over 70 there were many whose former service rather than present efficiency constituted the claim on the job. Many were still known to customers who did not wish to break old connections and who really valued the knowledge of their taste and requirements which rested on long association. Also, the long connection with the establishment in some cases constituted a

moral claim which the employer did not disregard. An instance of such a claim was found in the case of a woman well over 75 who was employed irregularly. In spite of her increasing eccentricity, she had been allowed to come back to the store after periods of absence, because of her long service and the affection with which she was regarded. Another woman, over 70, whose efficiency had been somewhat impaired as the result of an automobile accident, was retained because, in the words of the manager, "We like our old help, you know."

TABLE 1.—AGE DISTRIBUTION OF EMPLOYEES OVER 45 YEARS OF AGE

Age group	Employees in specified age group				
	Number	Per cent			
		Total	Establishment A	Establishment B	Establishment C
45 to 49 years	74	30.7	29.2	25.2	36.4
50 to 54 years	62	25.7	23.1	19.5	32.9
55 to 59 years	45	18.7	23.1	18.1	14.8
60 to 64 years	30	12.4	12.2	15.3	10.3
65 to 69 years	14	5.8	6.1	12.5	1.1
70 to 74 years	12	5.0	5.1	8.2	2.3
75 to 79 years	2	.8	1.2	----	1.1
Not reported	2	.9	----	1.2	1.1
Total	241	100.0	100.0	100.0	100.0

Educational Experience

Successful store service requires intelligence and an elementary education. Nearly one-half (46.9 per cent) of the older employees had attended grade schools only, about two-fifths (41.9 per cent) had benefited by at least some high-school education and less than a tenth had received either some college or vocational education. Specialized training for retail selling is given by the personnel departments of the stores, but it may safely be said that the majority of the older employees learned "on the job," by dint of observation and help from fellow employees. No specific educational requirements were fixed as a condition of employment.

TABLE 2.—NUMBER AND PER CENT OF EMPLOYEES WITH SPECIFIED EDUCATION

Type of education	Employees with specified education	
	Number	Per cent
Grade school	113	46.9
High school	101	41.9
College	7	2.9
Normal school	2	.8
Vocational school [1]	11	4.6
None [2]	7	2.9
Total	241	100.0

[1] Includes employees with vocational training in addition to grade or high school education.
[2] No formal school education.

Occupational Background

The first job.—Further indication of the character of the group older employees is indicated by their first jobs as paid worker More than two-fifths (43 per cent) began with store work, as shown Table 3. The others started their wage earning experience in wide varied employment. Jobs as far removed from store work as tho of bartenders, cowboys, carpenters, brick masons, chauffeurs, an farmers were reported as the first experience of the older men. Som of the women began to earn when very young, as factory hands Lowell and Fall River or in domestic service. Others were assistan to dressmakers or did sewing independently.

TABLE 3.—DISTRIBUTION OF EMPLOYEES ACCORDING TO FIRST JOB HELD

Occupation	Number of employees with first job as specifie			
	Establishment A	Establishment B	Establishment C	Total
Selling and buying	39	30	34	1
Factory work	7	7	17	
Tailoring and fitting	7	5	5	
Domestic work	4	3	10	
Office work	8	5	4	
Carpenters, porters, shippers	5	6	3	
Professional employment	4	4	4	
Farming	2	6	3	
Miscellaneous	6	5	8	
Total	82	71	88	2

As the statement following shows, some of the older employee became wage earners very early. All except 37 were over 14 whe they started to work. In 40 cases the employees held no paid positio until after 25 years of age. In the case of women this late beginnin was caused more often by early marriage than by an extensive perio of training. For example, one high-school graduate married soo after leaving school and lived on a farm until her husband's death mad it necessary for her to work in order to support her children. Stor work appeared to have been an attractive opening for women with n specialized training, for as an employee in the drapery department ex pressed it: "A woman feels more at ease in a department store sellin things she has long used in her own home."

Age at first employment:	Number of employees
5 to 9 years	3
10 to 14 years	34
15 to 19 years	111
20 to 24 years	49
25 to 29 years	13
30 to 34 years	12
35 to 39 years	5
40 to 44 years	6
45 years and over	4
Not reported	4
Total	241

Other principal employment.—As an indication of the characteristics of the group studied, previous employment over a considerable period is more significant than either education or the first job, since the

former was rarely vocational and the latter was seldom a matter of deliberate choice. Consequently, inquiry was made concerning earning experience other than merchandising. This was limited to the employment of longest duration in the history of each employee. The full job history of each individual was unobtainable since in many cases the person was unable to remember every position held, but it was assumed that the period of longest employment would always be remembered.

It is significant that almost one-half (103, or 43 per cent) had had their whole earning experience in stores or had held no other positions except of very short duration. The second largest number, 48, had worked in factories for their other principal employment and the third largest group, 23, in domestic work (including in this group waitresses, matrons, nurses, and housekeepers).

TABLE 4.—OTHER PRINCIPAL OCCUPATIONS OF STORE EMPLOYEES

Occupation	Number of employees with specified occupation			
	Establishment A	Establishment B	Establishment C	Total
No other	42	36	25	103
Factory work	13	10	25	48
Domestic work	6	4	13	23
Office work	7	3	6	16
Tailors and dressmakers	4	5	5	14
Professional	4	1	4	9
Janitors, shipping clerks, elevator men	4	1	4	9
Miscellaneous	2	11	6	19
Total	82	71	88	241

Length of merchandising experience.—A number of the older employees had accumulated many years of merchandising experience. Nearly two-fifths had been engaged in store work for over 20 years, and 19 persons for more than 40 years. Only a quarter had worked in stores less than 10 years. It is clear that the present tenure of job of this group is associated with long experience in the same line of work.

TABLE 5.—LENGTH OF MERCHANDISING EXPERIENCE

Years in merchandising	Number of employees	Per cent of total
Under 10 years	60	24.9
10 to 19 years	84	34.9
20 to 29 years	42	17.4
30 to 39 years	33	13.7
40 to 49 years	15	6.2
50 to 59 years	4	1.7
Not reported	3	1.2
Total	241	100.0

Present Employment

THE remainder of this study is concerned with the conditions of the present employment of the group over 45 years of age, and particularly with those aspects which may afford an explanation of the employee's claim on the position held.

Age When Employed

It was necessary, first to test the hypothesis that the present job was held in a large proportion of cases by persons who had been employed by the company when they were young. It proved to be true (as shown in Table 6) that considerably more than one-half the number were hired on their present job before they were 45; it was also clear that the group represented persons who were easily employable even after that age. More than a third (37 per cent) were taken on after their forty-fifth birthday and 13 persons were employed after reaching the age of 60. The largest group, 68 persons, were between 40 and 45 years old when they were hired. This group furnished abundant evidence of lack of prejudice on the part of retail-store managers against the hiring of older persons.

TABLE 6.—AGE OF EMPLOYEES AT TIME WHEN HIRED ON PRESENT JOB

Age group	Number of employees		
	Male	Female	Total
20 to 24 years	3	2	5
25 to 29 years	7	8	15
30 to 34 years	5	14	19
35 to 39 years	5	39	44
40 to 44 years	22	46	68
45 to 49 years	16	22	38
50 to 54 years	12	13	25
55 to 59 years	9	5	14
60 to 64 years	8	5	13
Total	87	154	241

Occupational Distribution

A grouping of these older employees by their present occupation (Table 7) showed that just about half (49 per cent) were engaged in actual selling. This is the same proportion that the selling force formed of the total force for all ages in the three stores. The proportion would be only slightly higher if the buyers over 45 who also act as salespeople were included. Older women who were selling outnumbered the older men, but women also outnumbered men in the entire force and in the other occupational groups except among the shipping-room employees, janitors, and the miscellaneous group (including occupations usually filled by men, such as truck drivers, stock clerks, and floor managers).

TABLE 7.—OCCUPATIONAL DISTRIBUTION OF EMPLOYEES, BY SEX

Occupation	Number of employees		
	Males	Females	Total
Sales persons	21	98	119
Buyers	9	16	25
Janitors and attendants	12	7	19
Work-room employees	5	12	17
Shipping-room employees	13	1	14
Lunch-room employees	3	10	13
Office employees	2	6	8
Others	22	4	26
Total	87	154	241

An occupational distribution of the older employees by age shows only a slight relation between age and the kind of work done. In the office force (which furnished the single example of a preference for younger persons) the employees were all under 60. The lunch-room employees were all under 65. But in the selling force proper there were employees of all ages up to and including the seventies.

TABLE 8.—OCCUPATIONAL DISTRIBUTION OF EMPLOYEES, BY AGE GROUPS

Occupation	Number of employees in specified occupation, aged—								
	45–49 years	50–54 years	55–59 years	60–64 years	65–69 years	70–74 years	75–79 years	Not reported	Total
Sales persons	42	33	24	9	5	4	2	----	119
Buyers	5	7	4	6	3	----	----	----	25
Janitors and attendants	5	4	5	2	1	1	----	1	19
Work-room employees	8	2	3	2	----	2	----	----	17
Shipping-room employees	----	2	3	3	2	3	----	1	14
Lunch-room employees	4	7	1	1	----	----	----	----	13
Office employees	2	5	1	----	----	----	----	----	8
Others	8	2	4	7	3	2	----	----	26
Total	74	62	45	30	14	12	2	2	241

Tenure of Present Job

THE older employees formed a staple part of the total force. As shown in the statement below, half of them had held their present positions more than 10 years at the time of the interviews and nearly a fifth for more than 20 years. It is important to note again, however, that a fifth of the group were able to secure employment less than 5 years ago, although they were then over 40 years of age.

Length of present job:	Number of employees
Under 5 years	46
Under 1 year	4
1 and under 2 years	6
2 and under 3 years	12
3 and under 4 years	15
4 and under 5 years	9
5 to 9 years	72
10 to 14 years	53
15 to 19 years	27
20 to 24 years	14
25 to 29 years	21
30 years and over	8
Total	241

The long tenure of the present position which characterized so many of the older employees was consistent with the fact that it covered the greater part of their total merchandising experience. More than one-half of the older employees had spent at least 80 per cent of their entire period of store employment with the same company. This is shown in Table 9.

TABLE 9.—TENURE OF PRESENT EMPLOYMENT AS PERCENTAGE OF TOTAL MERCHANDISING EXPERIENCE

Percentage of total experience	Number of persons			
	Establishment A	Establishment B	Establishment C	Total
1 to 19 per cent	6	15	2	23
20 to 39 per cent	19	11	6	36
40 to 59 per cent	10	6	14	30
60 to 79 per cent	9	3	10	22
80 to 99 per cent	11	8	10	29
No other experience	26	28	45	99
Not reported	1	0	1	2
Total	82	71	88	241

Transfers Within the Establishment

The older employees who had been in the same establishment for a long time had not required many transfers to easier jobs. As is seen by Table 10, three-quarters were still holding the same position to which they were first appointed. Moreover, the percentages of employees who had never been transferred were almost as large among the older employees as among the younger. The necessary adjustment apparently came in expending on the same job a little less energy as the years passed, rather than by surrendering it for another. There were, however, instances where the management had been forced to insist upon a change of occupation. Such a case was that of a successful salesman in the dry goods department who was made a receiving clerk because loss of hearing made it impossible to understand the wants of customers.

None of the stores in which these employees worked had a regular pension system, but each store was taking care of a number of former employees. The lack of a pension system may explain part of the willingness to retain on the pay roll some of the oldest employees. The stores were in agreement, however, that the group over 45 included many of their most valued employees.

TABLE 10.—TRANSFERS WITHIN THE ESTABLISHMENT

Age group	Employees having—			
	Job changed		Job unchanged	
	Number	Per cent	Number	Per cent
45 to 49 years	15	20	59	80
50 to 54 years	19	30	43	69
55 to 59 years	10	22	36	78
60 to 64 years	11	37	19	63
65 to 69 years	2	14	13	87
70 to 74 years	3	25	9	75
75 to 79 years			2	100
Total	60	25	181	75

Conclusion

A PICTURE has been presented of the retention of substantial proportions of older men and women in retail selling long past the time when their age would have been an insurmountable obstacle to the earning of a livelihood in many other occupations. It must be remembered that the stores covered in this report all belong to the type of large establishment which has been characteristic of department-store history in this country—establishments in which the founders and their successors (usually members of their families) have been well-known residents of their communities and thoroughly identified with the policies of the stores which bore their names. Although the leading department stores in most of our cities still belong to this group, the field is now being shared to an important extent with chain-store organizations. The employment policies which have been associated with the success of the older stores, and in particular the policy of retaining the older employees, may not be followed by stores whose relation to the community is only a link in a wider organization. Their practice may not be determined to the same extent by special recognition of years of loyal service which was often made by the older department stores. The conspicuous fact about the present study, however, was not that the older employees had succeeded in building up claims to their jobs, but that their service was regarded as efficient, in spite of (and often because of) their age. This was emphasized many times by store superintendents and personnel managers.

In so far as the employees studied are representative, their experience indicates far better employment opportunities for older employees in retail selling than exist in the manufacturing industries. This is probably due in large part to the relatively smaller demands made by their occupations on physical vigor but it is doubtless also due to fewer changes in technique.

During the last 20 years many of the tasks performed by skilled mechanics have changed so much that skill acquired in the beginning of the period is no longer valuable to the persons who possess it. In the meantime the clerks who sell in stores continue to do their work in pretty much the same way. The changes in financial organizations, advertising, and in methods of display, which have in many ways transformed retailing, have required little alteration in the way in which the clerk meets a customer and closes a sale. His success still depends on the nature of the personal contact he can establish. The training which the stores now give their employees in the art of selling merely points out the psychology of what has been done in the past by intelligence and happy intuition. Consequently, nothing in the nature of their occupation makes it inevitable that store employees should suffer the "technological unemployment" to which employees in many manufacturing occupations have been liable.

EMPLOYMENT CONDITIONS AND UNEMPLOYMENT RELIEF

Employment in the Construction of an Apartment House

THE United States Bureau of Labor Statistics recently completed a study of the man-hour productivity in the construction of an apartment house in Washington, D. C. The project selected for study was of reinforced concrete faced with brick and tile, 5 stories in height, and containing 117 apartments and a lobby. It was located in a popular residential district. The dwelling units ranged in size from one room, kitchenette, and bath, to five rooms and two baths.

The moving of dirt was started on September 9, 1931, and on April 1, 1932, the apartments were ready for occupancy; thus the job was largely one of winter construction. The winter was mild and, as a result, the work was carried on without complete loss of any whole day. No labor disturbances occurred during the course of the work.

Constant contact with the work was maintained by the bureau's representative, in order to keep account of any unusual incidents that might have a bearing on the work. Frequent trips were made to the job, at which time the figures of the primary contractor, who directly carried on several classes of work, were obtained. Figures of the subcontractors were obtained from their respective offices.

The study was undertaken to determine the amount of work in terms of man-hours done by each occupation or trade, in a building of this size and type, the rotation of each class of work, the duration of work for each occupation on the job, the number of men employed each day, and the progress of each trade as shown by man-hours worked per week in relation to the total man-hours worked by that trade.

So far as known this is a pioneer study of this character.

Day-by-Day Employment

TABLE 1 shows the number of men employed day by day in the construction of the apartment house, from the beginning to the completion of the job.

TABLE 1.—NUMBER OF MEN EMPLOYED ON THE BUILDING EACH DAY, SEPTEMBER 9 TO APRIL 2

Date	Number of men	Date	Number of men	Date	Number of men	Date	Number of men
Sept. 9	12	Oct. 31	139	Dec. 22	145	Feb. 12	77
Sept. 10	14	Nov. 1 [1]	[2] 26	Dec. 23	153	Feb. 13	55
Sept. 11	19	Nov. 2	220	Dec. 24	127	Feb. 14 [1]	[2] 12
Sept. 12	17	Nov. 3	218	Dec. 25	0	Feb. 15	83
Sept. 13 [1]	0	Nov. 4	230	Dec. 26	20	Feb. 16	80
Sept. 14	16	Nov. 5	229	Dec. 27 [1]	0	Feb. 17	93
Sept. 15	11	Nov. 6	213	Dec. 28	114	Feb. 18	89
Sept. 16	6	Nov. 7	157	Dec. 29	137	Feb. 19	93
Sept. 17	8	Nov. 8 [1]	[3] 15	Dec. 30	141	Feb. 20	65
Sept. 18	23	Nov. 9	198	Dec. 31	138	Feb. 21 [1]	[4] 9
Sept. 19	20	Nov. 10	185	Jan. 1	35	Feb. 22	89
Sept. 20 [1]	0	Nov. 11	195	Jan. 2	61	Feb. 23	98
Sept. 21	32	Nov. 12	217	Jan. 3 [1]	0	Feb. 24	111
Sept. 22	31	Nov. 13	206	Jan. 4	160	Feb. 25	102
Sept. 23	26	Nov. 14	167	Jan. 5	159	Feb. 26	108
Sept. 24	35	Nov. 15 [1]	[2] 3	Jan. 6	145	Feb. 27	74
Sept. 25	39	Nov. 16	187	Jan. 7	153	Feb. 28 [1]	[2] 6
Sept. 26	8	Nov. 17	178	Jan. 8	146	Feb. 29	99
Sept. 27 [1]	0	Nov. 18	186	Jan. 9	77	Mar. 1	93
Sept. 28	45	Nov. 19	187	Jan. 10 [1]	[2] 2	Mar. 2	90
Sept. 29	56	Nov. 20	187	Jan. 11	145	Mar. 3	85
Sept. 30	55	Nov. 21	147	Jan. 12	139	Mar. 4	90
Oct. 1	84	Nov. 22 [1]	0	Jan. 13	137	Mar. 5	68
Oct. 2	105	Nov. 23	161	Jan. 14	133	Mar. 6 [1]	[2] 8
Oct. 3	49	Nov. 24	161	Jan. 15	132	Mar. 7	84
Oct. 4 [1]	0	Nov. 25	158	Jan. 16	64	Mar. 8	83
Oct. 5	95	Nov. 26	136	Jan. 17 [1]	[2] 4	Mar. 9	90
Oct. 6	99	Nov. 27	154	Jan. 18	121	Mar. 10	86
Oct. 7	103	Nov. 28	109	Jan. 19	128	Mar. 11	83
Oct. 8	115	Nov. 29 [1]	[2] 9	Jan. 20	122	Mar. 12	59
Oct. 9	95	Nov. 30	67	Jan. 21	126	Mar. 13 [1]	[2] 10
Oct. 10	73	Dec. 1	164	Jan. 22	125	Mar. 14	59
Oct. 11 [1]	0	Dec. 2	160	Jan. 23	78	Mar. 15	57
Oct. 12	102	Dec. 3	164	Jan. 24 [1]	[2] 6	Mar. 16	66
Oct. 13	119	Dec. 4	152	Jan. 25	120	Mar. 17	56
Oct. 14	87	Dec. 5	97	Jan. 26	106	Mar. 18	56
Oct. 15	101	Dec. 6 [1]	[2] 18	Jan. 27	104	Mar. 19	39
Oct. 16	102	Dec. 7	190	Jan. 28	105	Mar. 20 [1]	0
Oct. 17	84	Dec. 8	197	Jan. 29	86	Mar. 21	54
Oct. 18 [1]	0	Dec. 9	146	Jan. 30	50	Mar. 22	52
Oct. 19	111	Dec. 10	204	Jan. 31 [1]	0	Mar. 23	37
Oct. 20	123	Dec. 11	214	Feb. 1	79	Mar. 24	37
Oct. 21	116	Dec. 12	148	Feb. 2	80	Mar. 25	30
Oct. 22	126	Dec. 13 [1]	15	Feb. 3	83	Mar. 26	19
Oct. 23	121	Dec. 14	210	Feb. 4	75	Mar. 27 [1]	0
Oct. 24	95	Dec. 15	220	Feb. 5	64	Mar. 28	16
Oct. 25 [1]	[2] 16	Dec. 16	211	Feb. 6	33	Mar. 29	13
Oct. 26	134	Dec. 17	214	Feb. 7 [1]	[2] 14	Mar. 30	14
Oct. 27	142	Dec. 18	210	Feb. 8	73	Mar. 31	8
Oct. 28	149	Dec. 19	122	Feb. 9	70	Apr. 1	4
Oct. 29	160	Dec. 20 [1]	0	Feb. 10	75	Apr. 2	3
Oct. 30	185	Dec. 21	161	Feb. 11	76		

[1] Sunday.
[2] All unskilled workers.
[3] 5 skilled-trades men, 10 laborers.
[4] 4 skilled-trades men, 5 laborers.

The fluctuation in employment, all trades combined, during the period of construction is depicted by Table 1. The greatest number of men working on any one day was 230—on November 4. The largest number of man-hours worked in a single day occurred on November 5, when 229 men put in 2,067 hours' work. Generally, any work done on Sunday was done by laborers, but on several Sundays some men in the skilled trades also worked. On Monday, November 30, there was rain, necessitating the stopping of work by bricklayers and plasterers and their laborers; this accounts for the decrease in number employed on that day as compared with the previous Saturday.

Time Spent on Each Class of Work

TABLE 2 shows the number of man-hours spent on each class of work and the per cent each formed of the total man-hours worked on the building.

TABLE 2.—NUMBER OF MAN-HOURS SPENT ON EACH CLASS OF WORK, AND PER CENT OF TOTAL TIME

Class of work	Man-hours worked		Class of work	Man-hours worked	
	Number	Per cent of total		Number	Per cent of total
Excavating	691	0.4	Plastering, helpers	5,071	3.3
Carpentry form	12,119	7.9	Bricklaying, partition wall	5,060	3.3
Carpentry form, helpers	14,548	9.4	Bricklaying, partition wall, helpers	7,013	4.5
Pile driving	2,456	1.6	Ventilation	342	.2
Concrete and cement work	11,440	7.4	Lathing	1,171	.8
Electrical work	3,427	2.2	Roofing	640	.4
Steam fitting	5,900	3.8	Carpentry, trim	3,414	2.2
Plumbing	8,788	5.7	General labor	7,693	5.0
Reinforced-steel work	3,190	2.1	Tile laying	2,427	1.6
Elevator construction	1,015	.7	Mosaic and terrazzo work	5,431	3.5
Refrigeration	1,716	1.1	Weather stripping	2,064	1.3
Bricklaying	10,466	6.8	Carpentry, parquet floors	3,711	2.4
Bricklaying, helpers	11,930	7.7	Painting	4,313	2.8
Stone masonry	712	.5	Paper hanging	1,712	1.1
Carpentry, rough	3,395	2.2	Screens	414	.3
Carpentry, rough, helpers	4,551	3.0	Shades	90	.1
Sheet-metal work	1,109	.7			
Waterproofing	183	.1	Total	154,161	100.0
Plastering	5,959	3.9			

Carpentry work (form, rough, trim, and the laying of parquet floors) accounted for the largest percentage of man-hours worked by any skilled trade group, being 14.7 per cent of the total.

Table 3 gives the limiting dates of each class of work, the average number of men employed in each class of work (when working), and the total man-hours, and shows, for some of the kinds of work, a measurement of the work done and the output per man-hour.

An attempt was made to show wherever possible the quantity of the work done (in terms of a standard unit of measurement) and the productivity per man-hour. For some classes of work it was impossible to determine a proper unit measurement of work—as for instance, for general labor. In certain other occupations, while a unit was used, it does not typify all classes of work done by workers in those occupations. For example, while the electrical outlet was used as the unit of measurement for electrical work, it is impossible to measure by this unit all the work done by the electricians.

The man-hours worked by the skilled men in the respective trades were added to the man-hours worked by helpers and laborers to complete such type of work and the quantity of work done was divided by the sum of the man-hours. As an example, the hours worked by plasterers, lathers, and plasterers' laborers were added and the number of square yards of work done was divided by the total number of hours, to find the square yards of work per man per hour.

It is of interest to observe in Table 3 the sequence of the several lines of work.

TABLE 3.—TERMINAL DATES, AVERAGE NUMBER OF MEN AT WORK, MAN-HOURS WORKED, AND OUTPUT ON SPECIFIED CLASSES OF WORK

Class of work	Date of—		Average number of men on job	Man-hours worked	Quantity of work done	Output per man-hour
	Start	Finish				
Excavating	Sept. 9	Sept. 17	10	691	5,129 cu. yds.	7.5 cu. yds.
Pile driving	Sept. 18	Oct. 8	18	2,456	581 piles	0.2 pile.
Concrete and cement work	Oct. 1	Mar. 31	18	11,440		
Carpentry form	Sept. 10	Nov. 24	22	12,119	34,350 cu. yds.	0.8 cu. yd.
Carpentry form, helpers	Sept. 11	Nov. 26	26	14,548		
Reinforced-steel work	Oct. 2	Nov. 23	11	3,190		
Electrical work	Oct. 1	Mar. 23	4	3,427	2,828 outlets	0.8 outlet.
Steam fitting	Oct. 1	Mar. 23	6	5,900		
Plumbing	Oct. 1	Mar. 23	9	8,788		
Elevator construction	Oct. 12	Mar. 29	2	1,015		
Refrigeration	Oct. 12	Mar. 30	4	1,716		
Bricklaying	Oct. 27	Dec. 24	26	10,466	774,342 brick & tile	35.0 brick & tile.
Bricklaying, helpers	Oct. 27	Dec. 24	24	11,930		
Stone masonry	Nov. 6	Jan. 6	5	712	1,350 cu. ft.	2.0 cu. ft.
Carpentry, rough	Nov. 6	Jan. 21	7	3,395		
Carpentry, rough, helpers	Nov. 11	Jan. 21	5	4,551		
Waterproofing	Nov. 17	Jan. 5	3	183	42,538 sq. ft.	230 sq. ft.
Plastering	Nov. 18	Mar. 18	10	5,959		
Lathing	Nov. 30	Feb. 17	3	1,171	52,000 sq. yds.	4.3 sq. yds.
Plastering, helpers	Nov. 18	Mar. 18	8	5,071		
Bricklaying, partition wall	Nov. 20	Jan. 28	11	5,060		
Bricklaying, partition wall, helpers	Nov. 20	Jan. 28	10	7,013	11,320 sq. yds.	0.9 sq. yd.
Sheet-metal work	Nov. 20	Feb. 6	5	1,109		
Ventilation	Nov. 23	Feb. 5	3	342		
Roofing	Dec. 7	Dec. 18	8	640	25,500 sq. ft.	39.8 sq. ft.
Carpentry, trim	Dec. 14	Mar. 31	5	3,414		
General labor	Jan. 4	Mar. 31	15	7,693		
Mosaic and terrazzo work	Jan. 4	Apr. 2	7	5,431	4,200 sq. ft.	0.8 sq. ft.
Tile laying	Jan. 4	Mar. 11	8	2,427	7,325 sq. ft.	3.0 sq. ft.
Weather stripping	Jan. 4	Feb. 26	6	2,064	1,285 openings	0.6 opening.
Carpentry, parquet floors	Jan. 18	Mar. 22	9	3,711	70,000 sq. ft.	18.5 sq. ft.
Painting	Feb. 15	Mar. 26	14	4,313		
Paper hanging	Feb. 15	Mar. 12	6	1,712	21,791 sq. yds.	12.7 sq. yds.
Screens	Mar. 15	Mar. 31	4	414	1,252 screens	3.0 screens.
Shades	Mar. 15	Mar. 22	3	90	1,250 shades	13.9 shades.

Weekly Fluctuations in Employment on Specified Classes of Work

TABLE 4 shows the time spent each week in each class of work.

TABLE 4.—MAN-HOURS SPENT EACH WEEK ON SPECIFIED CLASSES OF WORK

Class of work	Man-hours worked in week ending—									
	Sept. 12	Sept. 19	Sept. 26	Oct. 3	Oct. 10	Oct. 17	Oct. 24	Oct. 31	Nov. 7	Nov. 14
Excavating	442	249								
Carpentry, form	34	52	142	614	1,146	1,731	2,123	1,937	2,052	1,715
Helpers	42	161	346	1,145	1,441	1,575	1,776	2,081	2,264	2,173
Pile driving		193	850	814	599					
Concrete and cement work				366	950	1,102	1,255	1,774	1,741	1,274
Electrical work				27	104	120	136	160	160	160
Steam fitting				54	25	94	84	128	176	256
Plumbing				68	70	116	266	552	697	701
Reinforced-steel work				62	217	426	429	747	522	499
Elevator construction						3	3	3	4	4
Refrigeration						32	32	32	112	120
Bricklaying								484	1,693	1,392
Helpers								457	1,513	1,330
Stone masonry									60	156
Carpentry, rough									38	76
Helpers										37
Total	518	655	1,338	3,150	4,552	5,199	6,104	8,355	11,032	9,893

TABLE 4.—MAN-HOURS SPENT EACH WEEK ON SPECIFIED CLASSES OF WORK—Continued

Class of work	Man-hours worked in week ending—										
	Nov. 21	Nov. 28	Dec. 5	Dec. 12	Dec. 19	Dec. 26	Jan. 2	Jan. 9	Jan. 16	Jan. 23	Jan. 30
Carpentry, form	513	60									
Helpers	1,324	220									
Concrete and cement work	1,031	163	33	1,015	286	35					
Electrical work	160	160	160	160	168	128	128	128	160	152	160
Steam fitting	241	211	456	656	552	419	467	502	205	160	160
Plumbing	704	498	584	656	604	413	346	391	299	240	240
Reinforced-steel work	258	30									
Elevator construction	3		84	112	87	69	65			48	54
Refrigeration	120	120	120	72	144	24					
Bricklaying	1,573	1,129	959	1,082	1,551	603					
Helpers	1,142	1,336	1,293	1,751	1,969	724	415				
Stone masonry	184	148	64	16	24	24	16	20			
Carpentry, rough	399	570	278	361	359	244	395	297	204	174	
Helpers	122	198	503	519	551	164	484	701	420	552	300
Sheet-metal work	3	120	136	132	132	105	108	80	88	100	68
Waterproofing	43	25	42		24	21	22	6			
Plastering	161	416	231	192	658	338	592	780	880	475	320
Helpers	144	220	175	96	540	174	376	770	880	400	360
Bricklaying, partition wall	193	679	568	733	768	416	416	564	206	290	227
Helpers	99	736	712	957	869	515	781	794	402	676	472
Ventilation		80		64	80						48
Lathing			100	120	104	64	64	224	175	120	96
Roofing				320	320						
Carpentry, trim					64	192	192	386	334	303	219
General labor								301	857	315	302
Tile laying								216	265	260	279
Mosaic and terrazzo work								192	244	590	582
Weather stripping								396	396	396	396
Carpentry, parquet floors										396	396
Total	8,417	7,119	6,498	9,014	9,854	4,672	4,867	6,748	6,015	5,647	4,679

Class of work	Man-hours worked in week ending—									Total
	Feb. 6	Feb. 13	Feb. 20	Feb. 27	Mar. 5	Mar. 12	Mar. 19	Mar. 26	Apr. 2	
Excavating										691
Carpentry, form										12,119
Helpers										14,548
Pile driving										2,456
Concrete and cement work								212	203	11,440
Electrical work	160	160	96	96	96	96	96	96		3,427
Steam fitting	160	160	160	160	160	160	60	34		5,900
Plumbing	240	240	200	200	200	160	80	23		8,788
Reinforced-steel work										3,190
Elevator construction	80	80	80	68	30		59	72	7	1,015
Refrigeration	19			89	78	225	49	216	112	1,716
Bricklaying										10,466
Helpers										11,930
Stone masonry										712
Carpentry, rough										3,395
Helpers										4,551
Sheet-metal work	37									1,109
Waterproofing										183
Plastering	116	80	80	200	160	160	120			5,959
Helpers	184	96	96	140	160	140	120			5,071
Bricklaying, partition wall										5,060
Helpers										7,013
Ventilation	70									342
Lathing	56	24	24							1,171
Roofing										640
Carpentry, trim	185	232	274	295	249	197	168	100	24	3,414
General labor	738	1,010	1,128	1,060	682	469	443	278	110	7,693
Tile laying	260	263	144	272	280	188				2,427
Mosaic and terrazzo work	406	578	470	369	506	650	429	223	192	5,431
Weather stripping	120	120	120	120						2,064
Carpentry, parquet floors	396	440	443	440	412	396	392			3,711
Painting			742	742	742	742	742	603		4,313
Paper hanging			128	528	576	480				1,712
Screens							192	182	40	414
Shades							81	9		90
Total	3,227	3,483	4,185	4,779	4,331	4,063	3,031	2,048	688	154,161

The maximum weekly number of hours worked by all trades was in the week ending November 7, when 11,032 man-hours were worked. During that week, while only two occupations reached their actual peak in hours worked, five other classes of work were nearly at their maximum. The total number of man-hours put in on these seven classes of work in that week represents over nine-tenths of the total hours for the week. Of the 13 kinds of work carried on during that week, what is known as the "concrete group" (concrete and cement work, form carpentry, helpers on form carpentry, and reinforced-steel work) was responsible for 6,579 of the 11,032 man-hours worked during the week.

Table 5 is computed from Table 4. The first section of the table shows the per cent the man-hours worked by each occupation group each week formed of the total time worked that week.

The relative importance of some occupations in the continuity of construction at various periods is clearly evident in this table. This is especially true in the beginning and at the completion of the job. In the first week it will be noticed that excavating formed 85 per cent of the work. Then pile driving became the trade offering the greatest amount of employment. During the following eight weeks the concrete group became the most important. In the next six weeks the bricklayers and their laborers worked the majority of the hours. The plasterers, lathers, and their laborers were the leading occupations in hours worked for the next four weeks. Then the mosiac and terrazzo work became the leading trades for two weeks. Following these, the painters put in more hours than any other trade for six weeks. Thus the sequence and importance of each class of work became apparent until, in the final week, the majority of the work was performed by the cement workers on the walks and driveway.

The second section of the table shows for each kind of work the percentage done each week.

In the majority of the occupation classes, work is started with a small number of workers; this number increases as the work progresses, reaches its peak, and declines sharply to completion. Excavating was an exception, in that a full force was started on the first day.

While some occupations must complete or partially complete their part of the work before other classes of work can start, it is apparent that some operations go on throughout nearly the whole period of construction. Among these are the various kinds of carpentry work, electrical work, steam fitting, and plumbing. Other operations must stop at a certain point, after the rough or preliminary work is done, to allow certain other work to be completed. This is especially true of refrigeration and ventilation.

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TABLE 5.—PER CENT OF MAN-HOURS WORKED

Class of work	Per cent of total weekly time spent on each class of work											
	Sept. 12	Sept. 19	Sept. 26	Oct. 3	Oct. 10	Oct. 17	Oct. 24	Oct. 31	Nov. 7	Nov. 14	Nov. 21	Nov. 28
Excavating	85.3	38.0										
Carpentry, form	6.6	7.9	10.6	19.5	25.2	33.3	34.8	23.2	18.6	17.3	6.1	0.8
Helpers	8.1	24.6	25.9	36.3	31.7	30.3	29.1	24.9	20.5	22.0	15.7	3.1
Pile driving		29.5	63.5	25.8	13.2							
Concrete and cement work				11.6	20.9	21.2	20.6	21.2	15.8	12.9	12.2	2.3
Electrical work				.9	2.3	2.3	2.2	1.9	1.5	1.6	1.9	2.2
Steam fitting				1.7	.5	1.8	1.4	1.5	1.6	2.6	2.9	3.0
Plumbing				2.2	1.5	2.2	4.4	6.6	6.3	7.1	8.4	7.0
Reinforced-steel work				2.0	4.8	8.2	7.0	8.9	4.7	5.0	3.1	.4
Elevator construction						.1	(1)	(1)	(1)	(1)	(1)	
Refrigeration						.6	.5	.4	1.0	1.2	1.4	1.7
Bricklaying								5.8	15.3	14.1	18.7	15.9
Helpers								5.5	13.7	13.4	13.6	18.8
Stone masonry									.5	1.6	2.2	2.1
Carpentry, rough									.3	.8	4.7	8.0
Helpers										.4	1.4	2.8
Sheet-metal work											(1)	1.7
Waterproofing											.5	.4
Plastering											1.9	5.8
Helpers											1.7	3.1
Bricklaying, partition wall											2.3	9.5
Helpers											1.2	10.3
Ventilation												1.1
Lathing												
Roofing												
Carpentry, trim												
General labor												
Tile laying												
Mosiac and terrazzo work												
Weather stripping												
Carpentry, parquet floor												
Painting												
Paper hanging												
Screens												
Shades												
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Class of work	Per cent of specified class of work done during week											
Excavating	64.0	36.0										
Carpentry, form	.3	.4	1.2	5.0	9.5	14.3	17.5	16.0	16.9	14.2	4.2	0.5
Helpers	.3	1.1	2.4	7.9	9.9	10.8	12.2	14.3	15.6	14.9	9.1	1.5
Pile driving		7.9	34.6	33.1	24.4							
Concrete and cement work				3.2	8.3	9.6	11.0	15.5	15.2	11.1	9.0	1.4
Electrical work				.8	3.0	3.5	4.0	4.7	4.7	4.7	4.7	4.7
Steam fitting				.9	.4	1.6	1.4	2.2	3.0	4.3	4.1	3.6
Plumbing				.8	.8	1.3	3.0	6.3	7.9	8.0	8.0	5.7
Reinforced-steel work				1.9	6.8	13.4	13.5	23.4	16.4	15.6	8.1	.9
Elevator construction						.3	.3	.3	.4	.4	.3	
Refrigeration						1.9	1.9	1.9	6.5	7.0	7.0	7.0
Bricklaying								4.6	16.2	13.3	15.0	10.8
Helpers								3.8	12.7	11.1	9.6	11.2
Stone masonry									8.4	21.9	25.8	20.8
Carpentry, rough									1.1	2.2	11.8	16.8
Helpers										.8	2.7	4.4
Steel-metal work											.3	10.8
Waterproofing											23.5	13.7
Plastering											2.7	7.0
Helpers											2.8	4.3
Bricklaying, partition wall											3.8	13.4
Helpers											1.4	10.5
Ventilating												23.4
Lathing												
Roofing												
Carpentry, trim												
General labor												
Tile laying												
Mosaic and terrazzo work												
Weather stripping												
Carpentry, parquet floors												
Painting												
Paper hanging												
Screens												
Shades												
Total	.3	.4	.9	2.0	3.0	3.4	4.0	5.4	7.2	6.4	5.5	4.6

[1] Less than one-tenth of 1 per cent.

ON EACH CLASS OF WORK EACH WEEK

Per cent of total weekly time spent on each class of work—Continued

Dec. 5	Dec. 12	Dec. 19	Dec. 26	Jan. 2	Jan. 9	Jan. 16	Jan. 23	Jan. 30	Feb. 6	Feb. 13	Feb. 20	Feb. 27	Mar. 5	Mar. 12	Mar. 19	Mar. 26	Apr. 2	Total
																		0.4
																		7.9
																		9.4
																		1.6
0.5	11.3	2.9	0.8													10.4	29.5	7.4
2.5	1.8	1.7	2.7	2.6	1.9	2.7	2.7	3.4	5.0	4.6	2.3	2.0	2.2	2.4	3.2	4.7		2.2
7.0	7.3	5.6	9.0	9.6	7.4	3.4	2.8	3.4	5.0	4.6	3.8	3.4	3.7	3.9	2.0	1.7		3.8
9.0	7.3	6.1	8.8	7.1	5.8	5.0	4.3	5.1	7.4	6.9	4.8	4.2	4.6	3.9	2.6	1.1		5.7
																		2.1
1.3	1.2	.9	1.5	1.3			.9	1.2	2.5	2.3	1.9	1.4	.7		2.0	3.5	1.0	.7
1.8	.8	1.5	.5						.6			1.9	1.8	5.5	1.6	10.5	16.3	1.1
14.8	12.0	15.7	12.9															6.8
19.9	19.4	20.0	15.5	8.5														7.7
1.0	.2	.2	.5	.3	.3													.5
4.3	4.0	3.6	5.2	8.1	4.4	3.4	3.1											2.2
7.7	5.8	5.6	3.5	9.9	10.4	7.0	9.8	6.4										3.0
2.1	1.5	1.3	2.2	2.2	1.2	1.5	1.8	1.5	1.1									.7
.6		.2	.4	.5	.1													.1
3.6	2.1	6.7	7.2	12.2	11.6	14.6	8.4	6.8	3.6	2.3	1.9	4.2	3.7	3.9	4.0			3.9
2.7	1.1	5.5	3.7	7.7	11.4	14.6	7.1	7.7	5.7	2.8	2.3	2.9	3.7	3.5	4.0			3.3
8.7	8.1	7.8	8.9	8.5	8.4	3.4	5.1	4.9										3.3
11.0	10.6	8.8	11.0	16.1	11.8	6.7	12.0	10.1										4.5
	.7	.8						1.0	2.2									.2
1.5	1.3	1.1	1.4	1.3	3.3	2.9	2.1	2.1	1.7	.7	.6							.8
	3.6	3.2																.4
		.6	4.1	3.9	5.7	5.6	5.4	4.7	5.7	6.7	6.5	6.2	5.8	4.9	5.5	4.9	3.5	2.2
					4.5	14.2	5.6	6.5	22.9	29.0	27.0	22.2	15.8	11.5	14.6	13.6	16.0	5.0
					3.2	4.4	4.6	6.0	8.1	7.6	3.4	5.7	6.5	4.6				1.6
					2.8	4.1	10.4	12.4	12.6	16.6	11.2	7.7	11.7	16.0	14.2	10.9	27.9	3.5
					5.9	6.6	7.0	8.5	3.7	3.4	2.9	2.5						1.3
							7.0	8.5	12.3	12.6	10.6	9.2	9.5	9.8	12.9			2.4
											17.7	15.5	17.1	18.3	24.5	29.4		2.8
											3.1	11.0	13.3	11.8				1.1
															6.3	8.9	5.8	.3
															2.7	.4		.1
100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Per cent of specified class of work done during week—Continued

																		100.0
																		100.0
																		100.0
																		100.0
0.3	8.9	2.5	0.3													1.9	1.8	100.0
4.7	4.7	4.9	3.7	3.7	3.7	4.7	4.4	4.7	4.7	4.7	2.8	2.8	2.8	2.8	2.8	2.8		100.0
7.7	11.1	9.4	7.1	7.9	8.5	3.6	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	1.0	.6		100.0
6.6	7.5	6.9	4.7	3.9	4.4	3.4	2.7	2.7	2.7	2.7	2.3	2.3	2.3	1.8	.9	.3		100.0
																		100.0
8.3	11.0	8.6	6.8	6.4			4.7	5.3	7.9	7.9	7.9	6.8	3.0		5.8	7.1	.7	100.0
7.0	4.2	8.4	1.4						1.1			5.2	4.5	13.1	2.8	12.6	6.5	100.0
9.2	10.3	14.8	5.8															100.0
10.8	14.7	16.5	6.1	3.5														100.0
9.0	2.2	3.4	3.4	2.2	2.8													100.0
8.2	10.7	10.6	7.2	11.6	8.7	6.0	5.1											100.0
11.1	11.4	12.1	3.6	10.6	15.4	9.2	12.1	6.6										100.0
12.3	11.9	11.9	9.5	9.7	7.2	7.9	9.0	6.2	3.3									100.0
23.0		13.1	11.5	12.0	3.2													100.0
3.9	3.2	11.0	5.7	9.9	13.1	14.8	8.0	5.4	1.9	1.3	1.3	3.4	2.7	2.7	2.0			100.0
3.5	1.9	10.6	3.4	7.4	15.2	17.4	7.9	7.1	3.6	1.9	1.9	2.8	3.2	2.8	2.4			100.0
11.2	14.5	15.2	8.2	8.2	11.1	4.1	5.7	4.6										100.0
10.2	13.6	12.4	7.3	11.1	11.3	5.7	9.6	6.7										100.0
	18.7	23.4						14.0	20.5									100.0
8.5	10.2	8.9	5.5	5.5	19.1	14.9	10.2	8.2	4.8	2.1	2.1							100.0
	50.0	50.0																100.0
		1.9	5.6	5.6	11.3	9.8	8.9	6.4	5.4	6.8	8.0	8.6	7.3	5.8	4.9	2.9	.8	100.0
					3.9	11.1	4.1	3.9	9.6	13.1	14.7	13.8	8.9	6.1	5.8	3.6	1.4	100.0
					8.9	10.9	10.7	11.5	10.7	10.8	5.9	11.2	11.6	7.8				100.0
					3.5	4.5	10.9	10.7	7.5	10.6	8.7	6.8	9.3	12.0	7.9	4.1	3.5	100.0
					19.2	19.2	19.2	19.2	5.8	5.8	5.8	5.8						100.0
							10.7	10.7	10.7	11.9	11.9	11.9	11.1	10.7	10.6			100.0
											17.2	17.2	17.2	17.2	17.2	14.0		100.0
											7.5	30.8	33.6	28.0				100.0
															46.4	44.0	9.6	100.0
															90.0	10.0		100.0
4.2	5.8	6.4	3.0	3.2	4.4	3.9	3.7	3.0	2.1	2.3	2.7	3.1	2.8	2.6	2.0	1.3	.4	100.0

Spreading-Work Program of President's Conference of August 26, 1932

A NATIONAL conference of banking and industrial committees of the 12 Federal Reserve districts, called by President Hoover on August 14, met in Washington August 26, 1932, to draw up a coordinated nation-wide program of action against the economic depression. The President announced that the conference would deal "with specific projects where definite accomplishments in business, agriculture, and employment can be attained, and will coordinate the mobilization of private and governmental instrumentalities to that end." The chairman of the 12 committees representing the Federal Reserve districts and certain officials of the Government meeting on August 25, for the purpose of preliminary preparation of the program and organization of the conference, adopted a resolution favoring the appointment of a central committee to act as a central point of contact in those matters requiring cooperation between various public and semipublic agencies and the various banking and industrial committees. It was also recommended that subcommittees be formed to deal with the different subjects, among them one on increased employment through the sharing-work movement. The members of the conference included the Secretaries of the Treasury, Agriculture, Commerce, and Labor, and various other officials of these departments, representatives of the banking interests in the different districts, industrial leaders, and others.

In his opening address President Hoover said, in regard to the question of unemployment, that—

> As a matter of national policy, the shortening of hours is necessary not alone to meet the need of the moment but it may be necessary to take up the slack in the future from the vast and sudden advance in labor-saving devices. As the result of conferences similar to this nearly three years ago many industries realigned their operations by shorter hours to retain hundreds of thousands of workers who would otherwise have been dismissed.
>
> Nevertheless, the still further spreading of available work in industrial, commercial, and service activities, especially with every recovery of employment, would be a vital contribution. Your committee in the Twelfth District recently inaugurated a drive for this spread of work. Already it is a great success. Many methods have been proposed by labor and industrial leaders to systematically shorten hours.
>
> While I heartily favor the purpose of these plans, I agree with both the employers and the leaders of labor whom I have consulted that its direction is not properly the function of government, except as applied to the operation of government service. Moreover, with all the various phases of employment and operation to be met in private business, no general rule can be applied. Results must be achieved through cooperation on the part of employers and employees suited to each locality and industry. I suggest you should consider the effective part which you can play in further forwarding organization to this end.

In accordance with the recommendation of President Hoover and the organizing committee, a subcommittee, with Walter C. Teagle, President of the Standard Oil Co. of New Jersey as chairman, was appointed to promote increased employment through the sharing-work movement. The movement was definitely started the following day by Mr. Teagle's committee and was to be carried out under a uniform plan in all sections of the country. It was proposed to urge all employers to take on additional workers and to adjust the hours so that at the end of a given period all workers would have been employed the same amount of time. It was not intended, however, that any fixed plan such as the 6-hour day or the 5-day week should

be promoted, but that the individual employers should decide how they could spread work most effectively. Mr. Teagle will devote his entire time to the work and it is his hope that the job campaign will eventually put 2,000,000 men and women back to work. While the campaign will be carried on through the banking and industrial committees of each district, the endeavor will be made to secure the cooperation of employers' organizations such as the National Manufacturers' Association, the United States Chamber of Commerce, and other national, State, and local organizations. The cooperation of the workers will also be sought, as this is essential to the success of the program.

As an example of the possibilities of success, Mr. Teagle cited the case of his own company employing 23,000 persons, which by spreading out employment through reduction of hours, has been able to give employment to 3,000 more workers.

The slogan which has been adopted for the campaign is "job security by job sharing."

Secretary William N. Doak in his Labor Day address at Syracuse, N. Y., indorsed the plans of the conference and stated that the work of the conference is already bearing fruit as is evidenced by the fact that within less than a week after the adjournment of the conference there were thousands of men being called back to work in the different industries of the country. He also pointed out that a great number of the trade-unions in all parts of the country have, of their own accord, entered into a program of division of work to aid their fellow workers who are unemployed.

Plan of the Subcommittee on Industrial Rehabilitation

THE National Committee on Industrial Rehabilitation, under the chairmanship of A. W. Robertson, of Pittsburgh, is an outgrowth of the conference. This committee has plans under way for an intensive equipment modernization movement throughout the country, which is designed to put back on the pay roll 1,620,000 workers in factories manufacturing machinery and plant equipment. The committee will concentrate on getting manufacturers in all the principal industrial centers to modernize their plants now, at a time when their machinery is run down or obsolete and when financial and credit conditions are improved and installation costs for machinery are low. Mr. Robertson states:

> The committee believes that if industry will proceed now for reasons of sound self-interest to put its house in order and to remedy through modernization the run-down condition of its productive equipment, employment will be created for hundreds of thousands of workers in the "capital goods" industries. In addition, it will bring back on pay rolls hundreds of thousands of workers in other industries which furnish the parts, raw materials, and services bought by the machinery and equipment manufacturers. This will release millions of dollars in wages spent for individuals and family purchases, affecting business in every community.

The importance of this program is shown by the fact that expenditures for equipment, machinery, and plant facilities have fallen from an average annual outlay of $5,000,000,000 in normal times to a yearly total of $1,260,000,000, and Mr. Robertson believes that this constitutes one of the major factors in the continuance of the depressed condition of American industry. More than 50 per cent of the equip-

ment in American factories is said to be obsolete at the present time and the fact that in the past three years there has been more rapid improvement in equipment design than in any other period, while replacement has not kept up with this engineering advance, makes the condition so much the more urgent. The objective of the committee is to set in motion a succession of orders which will extend, in their effect on employment and spending, from the factory back to the farms, the forests, and the mines.

The committee will work through sectional committees set up in each of the Federal Reserve districts. Each of these committees will appoint special subcommittees to serve in each of the industrial areas within the districts, on which local business and industrial leaders will be represented. The committees will be generally conversant with the replacement needs of the manufacturers and will be equipped with ample evidence to prove that modernization should be undertaken without further delay. The need for immediate action is recognized by the members of the committee and all those cooperating with it and the attempt will be made to secure definite results before another month has passed.

Hearings Before California Unemployment Commission

THE 1931 Legislature of California created a State unemployment commission, authorizing it to study the problem of unemployment and to formulate plans and recommend legislation. Following is a summary of the hearings before the commission, given in its report to the governor's council.[1]

"Officials from the relief agencies in different sections of the State explained the situation in their respective communities, the extent of unemployment, existing needs, assistance given, current expenses, and the estimates for the ensuing year. Among the problems discussed were: Methods of relief, the functions of the State labor camps, the care of transients, single men and migratory families, responsibility between the State and municipalities in these matters, provision for the white-collar unemployed and for unattached women, the matter of rents and evictions, adequacy of assistance given, and the effectiveness of work relief in an emergency program.

"Outstanding recommendations offered by those attending the hearings for unemployment prevention and relief were: Reduction of the hours of labor in order to distribute employment among a larger number of persons and to give work to those displaced by labor-saving machines, a planned program of public works to be released during periods of depression, the establishment of some form of unemployment reserves and compensation to provide an incentive to industry to regularize employment and to furnish a substitute for present methods of relief giving, and State aid to counties and municipalities for unemployment relief.

"Much interest was expressed in unemployment reserves, or insurance. Of the 78 persons who testified regarding the subject, 70 favored some form of this protection, there were 3 doubtful, and 5 were opposed. Various systems were advocated by the speakers,

[1] California. Department of Industrial Relations. Report to Governor's Council. San Francisco, August, 1932. (Mimeographed.)

contributory and noncontributory; both separate reserves for individual plants and pooled reserves for a group of plants or industries.

"Reduction of the hours of labor was regarded by a number of the speakers as essential in dealing with the existing situation. Of 62 persons who discussed the question of restricting the present working time as a means of reducing unemployment, 53 favored such arrangement, 6 were noncommittal or doubtful, and only 3 expressed opposition. Various plans were recommended: The 6-hour day and 5-day week, by the majority. Some advocated the 7-hour day and 5-day week. There was also variation in the proposed application of the recommendation. Most of the speakers favored confining mandatory reduction of hours to public works and public employment. Several favored including private industry as well.

"There was fairly general agreement with regard to the desirability of advance planning of public works. This was discussed by 32 persons, of whom 28 indorsed the proposition as one means of relieving unemployment and assisting in stabilization. There were 4 doubtful; none were definitely opposed.

"On the question of State aid to municipalities for emergency relief, there was more divergence of opinion. Out of 35 who expressed their views on the subject, 27 were in favor; 5 were opposed; 2 favored State help in the case of nonresidents but opposed the assistance in the case of resident unemployed; 3, including 2 who favored State aid, recommended that effort should also be made to secure Federal support.

"There was substantial agreement as to the desirability of maintaining or expanding the public employment offices. Out of 28 discussing the relation of placement agencies to unemployment prevention and relief, 25 expressed approval of the free State agencies; 14, including several of those suggesting their expansion, recommended abolition of private fee-charging agencies; while 2 favored further regulation.

"A number of proposals for legislative action were offered. In addition to the subjects just mentioned, these included the following:

"(*a*) Creation of a State building fund to permit citizens to borrow for home building, under conditions similar to those now granted ex-service men;

"(*b*) Action by the State to give authority to municipalities to acquire by condemnation, land for slum-clearance programs, and to authorize formation of limited-dividend companies in connection with such programs;

"(*c*) Tax exemption for a period of 10 years on private building construction started during the next 3 years, as a means of stimulating industry;

"(*d*) Creation of a State economic council to assist in stabilization of employment;

"(*e*) Authorizing the department of industrial relations, or some commission, to promote the regularization of employment;

"(*f*) A study of California industries with a view to stabilizing seasonal employment;

"(*g*) Establishment of a State bureau of industrial training to develop a program of vocational re-education;

"(*h*) Amendment to the public works law to provide for creation of reserves to be released during periods of depression;

"(*i*) Provision that highway funds need not be allocated definitely to certain highways, in order to permit the department of public works to meet emergencies;

"(*j*) Prohibiting taking a fee from any person sent to a public construction job or public works;

"(*k*) Requiring registration of all unemployed;

"(*l*) Provision for publicly owned and operated shelters, in the centers of population, for homeless unemployed men;

"(*m*) Amendment of the residence law to provide for the care of migratory workers who are residents of the State, but without a settled place of abode in any county;

"(*n*) Extension of operation and service rendered by the State labor camps;

"(*o*) Further restriction of child labor and extension of educational opportunities for children;

"(*p*) Extension of scope of old-age pension law to include groups not now covered, or to lower the age limit and increase the amount of pension;

"(*q*) Automatic adjustment of minimum wage rates for women and minors to meet changes in the cost of living.

"A significant feature of the hearings was the emphasis placed by a majority of the speakers on corrective measures. The economists, business men, and representatives of organized labor who testified were mainly concerned with the elimination or reduction of unemployment. Although alleviation of the existing distress was naturally urged as the primary consideration by those in direct contact with the relief situation, many of the proposals presented by such groups have to do with preventive action. Delegates from the welfare organizations and unemployed workers in a number of instances advocated, in addition to emergency assistance, the adoption by the State and municipalities of some constructive program looking toward a solution of the problem.

"Some of the newspaper comment gives the impression that the foregoing ideas or plans emanated from the State unemployment commission. This is not the case. The opinions were presented by the residents of California who attended the public hearings, either representing themselves personally or speaking for groups in the community. It was natural to have a variety of suggestions. The baffling situation in which our social order finds itself, the despair of men and women seeking work and unable to find anything to do, the inability of business men to point ways out, and the earnestness of all in facing the problem, had a lasting effect on those who attended the hearings."

Unemployment in Hawaii, Summer of 1932

A BRIEF survey of unemployment conditions in Hawaii was made by the chairman of the Governor's Committee on Unemployment in that Territory in a talk to a conference of social workers. That portion describing the situation, reproduced from the Honolulu Star-Bulletin of July 29, 1932, is given below:

The unemployment situation in Hawaii is not nearly as serious as it is on the mainland, either in regard to numbers or living conditions

—food, shelter, and clothing. Having no winter, the shelter and clothing problems are relatively simple, and also on this account vegetables and other food crops can be raised the year round. In addition, at least those in the country districts can obtain some subsistence by fishing. The city of San Diego, with a population similar to that of Honolulu, and not a manufacturing town, has been feeding approximately 15,000 a day.

Hawaii's problem has been confined primarily to those heretofore engaged in construction work and employed by the pineapple companies. To be sure there have been other causes for unemployment, such as the curtailment of activities of firms like the Honolulu Iron Works, the decrease in numbers employed by the various hotel companies, the dismissal of one or more servants by those who could no longer afford to maintain them, and so forth. But the numbers so affected are of relatively minor importance.

Then too, Honolulu normally has about 2,000 unemployed or unemployable, such as the habitués of pool rooms. These in ordinary times could pick up odd jobs a few days a month and thereby subsist. Finally, there is one other source of unemployment of an extremely serious nature. This is the youth graduating from our schools and who can not find a job. He lives at home with his parents, and hence there is no real destitution or want, but it will not take many months of loafing to result in his becoming a permanent liability to the community.

Principal Cause Told

As STATED above, the principal cause for our unemployment problem is the curtailment of pineapple and construction activities. During the past year the pineapple companies, together with their planters, have laid off somewhere around 4,000 field laborers. Most of these were Filipinos. Many of them drifted to Honolulu, but the vast majority went to the smaller towns throughout the islands, or stayed with relatives and friends on sugar plantations. This situation has practically been rectified. The sugar plantations give additional employment by working their forces on a part-time basis. Through the efforts made by the H. S. P. A., Filipinos stopped coming to the Territory, while approximately 500 per month have continued to return to the Philippines. Then, too, the harvesting of the pineapple crop creates a demand for this type of labor. Only recently one of the pineapple companies requiring 50 Filipinos was able to secure only two here in Honolulu. To be sure, in a month or so the packing season will be over, but the sugar plantation crops are also completed in the early fall of the year, and on their completion there is quite an exodus of Filipinos to their homeland.

The unemployment situation resulting from the reduction in all building and construction activities is far more serious. A few months ago a survey of the situation indicated that construction work was being carried on at about two-thirds the normal basis. Since the census showed approximately 3,600 engaged in construction work, this meant that there were about 1,200 unemployed for this reason.

This figure checked very closely with the applications on file at the various employment agencies. Indications are that new construction jobs are smaller both in number and magnitude than those being completed, and therefore it is expected that the number of unemployed of this class will increase rather than decrease.

Social Relief Last Resort

As I have already said, the policy adopted by those who are endeavoring to cope with the unemployment situation here in Hawaii is to afford work relief and not social relief, except as a last resort. There are four general lines of approach which have been followed more or less successfully.

First might be mentioned the so-called Muncie plan, a clean-up, fix-up, paint-up campaign, with the idea of creating odd jobs about the homes as well as the downtown offices. The committee in charge of this, assisted by the Junior League, the American Legion, and Legion Auxiliary, have, with some success, conducted a house-to-house canvass throughout some of the districts of the city.

Second, is the work carried on by the stabilization committee. The activity of this committee is primarily that of urging employers of labor not to lay off men, but to work them, if necessary, on a part-time basis. It is a pleasure to report that not only has the thorough cooperation of the various concerns of these islands been obtained, but such a policy in most cases had already been adopted prior to the formation of this committee.

A third form of activity is in connection with the promotion of home gardens. This work has not only proven quite encouraging here in Honolulu, but is also meeting with success on a number of the plantations.

The fourth method is what might be termed the artificial creation of jobs by means of public and private contributions.

During the recent session of the legislature $100,000 was appropriated for the creation of work for unemployment relief. The governor appointed a special committee for the purpose of handling this appropriation. This committee decided that jobs should first be allotted to those who were destitute and who had dependents. This meant that a careful social investigation should be made of each application. It was decided that work for only five hours a day should be given in order that those working by means of this appropriation would have an opportunity to seek employment elsewhere. The compensation was fixed at 30 cents per hour.

The number of days work per week allotted is dependent upon the size of the family budget as estimated by the committee. These estimates are based upon affording bare subsistence. Most of the work furnished from this fund has been in connection with the development of our parks, the counties supplying tools and supervision and such material as may be needed.

Unemployment in Foreign Countries

THE following table gives detailed monthly statistics of unemployment in foreign countries, as shown in official reports, from August, 1930, to the latest available date:

STATEMENT OF UNEMPLOYMENT IN FOREIGN COUNTRIES

Date (end of month)	Australia		Austria	Belgium			
	Trade-unionists unemployed		Compulsory insurance, number unemployed in receipt of benefit	Unemployment insurance societies			
				Wholly unemployed		Partially unemployed	
	Number	Per cent		Number	Per cent	Number	Per cent
1930							
August	(1)		156,145	17,747	2.8	51,649	8.2
September	90,379	20.5	163,894	23,693	3.8	61,623	9.9
October	(1)		192,778	27,322	4.3	54,804	8.5
November	(1)		237,745	38,973	6.1	76,043	12.0
December	104,951	23.4	294,845	63,585	9.3	117,167	17.0
1931							
January	(1)		331,239	77,181	11.1	112,734	16.2
February	(1)		334,041	81,750	11.7	121,906	19.4
March	113,614	25.8	304,084	81,305	11.3	125,972	17.7
April	(1)		246,845	70,377	10.0	110,139	15.6
May	(1)		208,852	56,250	7.9	97,755	13.8
June	118,424	27.6	191,150	62,642	8.9	101,616	14.4
July	(1)		194,364	64,644	9.1	116,747	16.3
August	(1)		196,321	70,893	9.9	120,669	16.8
September	120,694	28.3	202,130	74,175	10.3	119,433	16.6
October	(1)		228,101	82,811	11.3	122,733	16.8
November	(1)		273,658	93,487	13.3	134,799	19.2
December	118,732	28.0	329,627	128,884	17.0	159,941	21.1
1932							
January	(1)		358,114	153,920	20.0	179,560	23.2
February	(1)		361,948	168,204	21.3	180,079	22.8
March	120,366	28.3	352,444	155,653	19.4	185,267	23.0
April	(1)		303,888	152,530	18.8	183,668	22.6
May	(1)		271,481	160,700	18.9	191,084	22.5
June	124,068	30.0	265,040	153,659	18.7	173,819	21.2
July			266,365	169,411	19.6		
August			269,179				

Date (end of month)	Canada	Czechoslovakia			Danzig (Free City of)	Denmark	
	Per cent of trade-unionists unemployed	Number of unemployed on live register	Trade-union insurance funds—unemployed in receipt of benefit		Number of unemployed registered	Trade-union unemployment funds—unemployed	
			Number	Per cent		Number	Per cent
1930							
August	9.3	88,005	52,694	4.7	15,687	26,232	9.0
September	9.4	104,534	57,542	5.3	16,073	27,700	9.0
October	10.8	122,379	61,213	5.5	17,307	32,880	11.4
November	13.8	155,203	65,904	5.9	20,272	44,200	15.3
December	17.0	239,564	93,476	8.3	24,429	71,100	24.6
1931							
January	16.0	313,511	104,580	9.5	27,081	70,961	24.2
February	15.6	343,972	117,450	10.0	28,192	73,427	26.0
March	15.5	339,505	119,350	10.0	27,070	67,725	22.1
April	14.9	296,756	107,238	8.9	24,186	45,698	15.3
May	16.2	249,686	93,941	7.6	20,686	37,856	12.3
June	16.3	220,038	82,534	6.6	19,855	34,030	11.3
July	16.2	209,233	82,759	6.6	20,420	36,369	11.8
August	15.8	214,520	86,261	6.9	21,509	35,060	11.8
September	18.1	228,383	84,660	6.7	22,922	35,871	12.1
October	18.3	253,518	88,600	6.9	24,932	47,196	16.0
November	18.6	336,874	106,015	8.2	28,966	66,526	22.3
December	21.1	480,775	146,325	11.3	32,956	91,216	30.4
1932							
January	22.0	583,138	186,308	14.0	34,912	106,464	35.1
February	20.6	631,736	197,612	14.8	36,258	112,346	37.3
March	20.4	633,907	195,076	14.6	36,481	113,378	37.5
April	23.0	555,832	180,456	13.3	33,418	90,704	29.9
May	22.1	487,228	171,389	12.6	31,847	79,931	26.1
June	21.9	466,948	168,452	12.3	31,004	80,044	25.6
July	21.8	453,294			29,195	92,732	29.5
August		459,406			28,989	94,868	30.1

[1] Not reported.

STATEMENT OF UNEMPLOYMENT IN FOREIGN COUNTRIES—Continued

Date (end of month)	Estonia	Finland	France	Germany			
					Trade-unionists		
	Number unemployed remaining on live register	Number of unemployed registered	Number of unemployed in receipt of benefit	Number of unemployed registered	Per cent wholly unemployed	Per cent partially unemployed	Number unemployed in receipt of benefit
1930							
August	1,039	5,288	964	2,883,000	21.7	14.8	1,947,811
September	1,414	7,157	988	3,004,000	22.5	15.1	1,965,348
October	3,282	10,279	1,663	3,252,000	23.6	15.4	2,071,730
November	5,675	10,740	4,893	3,683,000	26.0	16.1	2,353,980
December	6,163	9,336	11,952	4,384,000	31.7	16.9	2,822,598
1931							
January	5,364	11,706	28,536	4,887,000	34.2	19.2	3,364,770
February	4,070	11,557	40,766	4,972,000	34.5	19.5	3,496,979
March	2,765	11,491	50,815	4,756,000	33.6	18.9	3,240,523
April	2,424	12,663	49,958	4,358,000	31.2	18.0	2,789,627
May	1,368	7,342	41,339	4,053,000	29.9	17.4	2,507,732
June	931	6,320	36,237	3,954,000	29.7	17.7	2,353,657
July	634	6,790	35,916	3,976,000	31.0	19.1	2,231,513
August	933	9,160	37,673	4,215,000	33.6	21.4	2,376,589
September	2,096	12,176	38,524	4,355,000	35.0	22.2	2,483,364
October	5,425	14,824	51,654	4,623,480	36.6	22.0	2,534,952
November	7,554	18,095	92,157	5,059,773	38.9	21.8	2,771,985
December	9,055	17,223	147,009	5,668,187	42.2	22.3	3,147,867
1932							
January	9,318	20,944	241,487	6,041,910	43.6	22.6	3,481,418
February	9,096	18,856	293,198	6,128,429	44.1	22.6	3,525,486
March	8,395	17,699	303,218	6,034,100	44.6	22.6	3,323,109
April	6,029	16,885	282,013	5,934,202	43.9	22.1	2,906,890
May	4,853	13,189	262,184	5,582,620	43.3	22.9	2,658,042
June	5,384	12,709	232,371	5,475,778	43.1	20.4	2,484,944
July	3,137	13,278	262,642	5,392,248	43.9	23.0	2,111,342
August			264,253	5,224,710			1,995,697

Date (end of month)	Great Britain and Northern Ireland				Great Britain	Hungary	
	Compulsory insurance					Trade-unionists unemployed	
	Wholly unemployed		Temporary stoppages		Number of persons registered with employment exchanges	Christian (Budapest)	Social-Democratic
	Number	Per cent	Number	Per cent			
1930							
August	1,500,990	12.4	618,658	5.1	2,039,702	847	21,013
September	1,579,708	13.1	608,692	5.0	1,114,955	874	22,252
October	1,725,731	13.9	593,223	4.8	2,200,413	999	22,914
November	1,836,280	14.8	532,518	4.3	2,274,338	975	23,333
December	1,853,575	14.9	646,205	5.3	2,392,738	935	24,648
1931							
January	2,044,209	16.5	618,633	5.0	2,613,749	953	26,191
February	2,073,578	16.7	623,844	5.0	2,627,559	965	27,089
March	2,052,826	16.5	612,821	5.0	2,581,030	996	27,092
April	2,027,896	16.3	564,884	4.6	2,531,674	1,042	27,129
May	2,019,533	16.3	558,383	4.5	2,596,431	843	26,131
June	2,037,480	16.4	669,315	5.4	2,629,215	751	23,669
July	2,073,892	16.7	732,583	5.9	2,662,765	876	26,329
August	2,142,821	17.3	670,342	5.4	2,732,434	941	28,471
September	2,217,080	17.9	663,466	5.3	2,879,466	932	28,716
October	2,305,388	18.1	487,591	3.8	2,755,559	1,020	28,998
November	2,294,902	18.0	439,952	3.4	2,656,088	1,169	29,907
December	2,262,700	17.7	408,117	3.2	2,569,949	1,240	31,906
1932							
January	2,354,044	18.4	500,746	4.0	2,728,411	1,182	32,711
February	2,317,784	18.2	491,319	3.8	2,701,173	1,083	32,640
March	2,233,425	17.5	426,989	3.3	2,567,332	1,024	31,347
April	2,204,740	17.3	521,705	4.1	2,652,181	961	30,055
May	2,183,683	17.1	638,157	5.0	2,741,306	922	28,835
June	2,145,157	16.8	697,639	5.5	2,747,343	960	28,372
July	2,185,015	17.1	735,929	5.8	2,811,782		
August	2,215,704	17.4	731,104	5.7	2,859,828		

STATEMENT OF UNEMPLOYMENT IN FOREIGN COUNTRIES—Continued

Date (end of month)	Irish Free State	Italy		Latvia	Netherlands	
	Compulsory insurance—number unemployed	Number of unemployed registered		Number unemployed remaining on live register	Unemployment insurance societies—unemployed	
		Wholly unemployed	Partially unemployed		Number	Per cent
1930						
August	(1)	375,548	24,056	573	32,755	7.6
September	20,775	394,630	22,734	1,470	35,532	8.2
October	22,990	446,496	19,081	6,058	41,088	9.6
November	25,622	534,356	22,125	8,608	46,807	11.8
December	26,167	642,169	21,788	10,022	81,204	18.2
1931						
January	28,681	722,612	27,924	9,207	100,340	23.2
February	26,825	765,325	27,110	8,303	109,235	23.5
March	25,413	707,486	27,545	8,450	102,743	21.8
April	23,970	670,353	28,780	6,390	68,860	14.3
May	23,016	635,183	26,059	1,871	60,189	12.2
June	21,427	573,593	24,206	1,584	59,573	11.7
July	21,647	637,531	25,821	2,169	69,026	13.3
August	21,897	693,273	30,636	4,827	70,479	15.3
September	23,427	747,764	29,822	7,470	72,738	15.7
October	26,353	799,744	32,828	13,605	84,548	18.0
November	30,865	878,267	30,967	18,377	107,372	18.5
December	30,918	982,321	32,949	21,935	147,107	27.8
1932						
January	31,958	1,051,321	33,277	26,335	145,124	27.0
February	31,162	1,147,945	26,321	22,222	139,956	25.4
March	30,866	1,053,016	31,636	22,912	119,423	21.6
April	32,252	1,000,025	32,720	14,607	121,378	21.7
May	35,874	968,456	35,528	7,599	112,325	22.5
June	[2] 66,912	905,097	31,710	----------	113,978	22.8
July	[2] 77,648	931,291	33,218	----------	123,947	24.6
August	----------	----------	----------	----------	----------	----------

Date (end of month)	New Zealand	Norway			Poland	Rumania
	Trade-unionists, number unemployed	Trade-unionists (10 unions) unemployed		Number unemployed remaining on live register	Number unemployed registered with employment offices	Number unemployed remaining on live register
		Number	Per cent			
1930						
August	7,197	5,897	13.4	12,923	173,627	24,209
September	(1)	7,010	15.7	17,053	170,467	39,110
October	(1)	8,031	18.0	20,363	165,154	36,147
November	8,119	9,396	21.4	24,544	209,912	42,689
December	(1)	11,265	25.5	27,157	299,797	36,212
1931						
January	(1)	11,692	26.3	28,596	340,718	38,804
February	(1)	(1)	----------	29,107	358,925	43,270
March	[3] 38,028	11,213	24.9	29,095	372,536	48,226
April	[3] 36,981	(1)	----------	28,477	351,679	41,519
May	[3] 40,507	----------	----------	25,206	313,104	33,484
June	[3] 45,264	----------	----------	22,736	274,942	28,093
July	[3] 47,772	----------	----------	20,869	255,179	29,250
August	[3] 50,033	----------	----------	22,431	246,380	22,708
September	[3] 51,375	----------	----------	27,012	246,426	22,909
October	[3] 50,266	[4] 9,048	[4] 19.6	29,340	255,622	28,800
November	[3] 47,535	10,577	22.8	32,078	266,027	43,917
December	[3] 45,140	12,633	27.2	34,789	312,487	49,393
1932						
January	[3] 45,677	14,160	30.4	35,034	338,434	51,612
February	[3] 44,107	14,354	30.6	38,135	350,145	57,606
March	[3] 45,383	15,342	32.5	38,952	360,031	55,306
April	[3] 48,601	14,629	30.8	37,703	339,773	47,206
May	[3] 53,573	13,465	28.3	32,127	306,801	39,654
June	[3] 54,342	----------	----------	28,429	264,147	33,679
July	[3] 55,203	----------	----------	26,390	219,900	----------
August	----------	----------	----------	27,543	187,537	----------

[1] Not reported.
[2] Registration area extended.
[3] New series of statistics showing unemployed registered by the employment exchanges. Includes not only workers wholly unemployed but also those intermittently employed.
[4] Strike ended.

STATEMENT OF UNEMPLOYMENT IN FOREIGN COUNTRIES—Continued

Date (end of month)	Saar Territory	Sweden	Switzerland		Yugoslavia
			Unemployment funds		
	Number unem-	Trade-unionists unemployed	Wholly unem-	Partially unem-	Numb

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welfare office will make possible additional construction on whic
employment will be given to laborers now receiving city relief pa
ments. The loans will be equal in amount to the welfare benefi
which the laborers employed in this way would receive from the cit
were they without employment and receiving relief payments fro
public funds. These loans will bear 1 per cent interest and will b
repayable, into a sinking fund managed by the city, at the rate of
per cent per year. In amount they may vary from 500 to 3,00
marks ($119 to $714) for 1-family houses with an additional 1,50
marks ($357) for each dwelling in excess of one in multifamily house
The Stuttgart Welfare Office is authorized to grant loans in the abov
amounts immediately, but for enterprises involving greater amount
of capital the approval of the finance division of the city counc
must be obtained.

While construction projects of all kinds are eligible for these loans, is expected that they will be availed of principally by contractors ishing to erect new houses of modest proportions and to renovate nd modernize buildings erected before the war.

The loans will be granted only under the following:

1. Work thus financed must entail the employment of additional borers and must cause a net reduction in the number of building

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e advantage. However, even should a case arise in which skilled bor was employed exclusively, almost one-half of the labor cost of e undertaking could be financed through the city welfare office at e favorable interest rate of 1 per cent.

Local contractors estimate that labor costs constitute on an average 0 per cent of building costs and, if this figure is applied to the above remise, it will be seen that Stuttgart entrepreneurs can obtain from e city welfare office at least 15 per cent of their building capital at per cent interest.

Costs of materials.—To supplement the finance program described bove and further to encourage local building, an additional loan of ,500 marks ($595) at 2½ per cent interest, with 1 per cent sinking- nd arrangements, will be granted by the city of Stuttgart itself to ny builder who employs local laborers exclusively in any construction

STATEMENT OF UNEMPLOYMENT IN FOREIGN COUNTRIES—Continued

Date (end of month)	Saar Territory	Sweden		Switzerland				Yugoslavia
				Unemployment funds				
	Number unemployed registered	Trade-unionists unemployed		Wholly unemployed		Partially unemployed		Number of unemployed registered
		Number	Per cent	Number	Per cent	Number	Per cent	
1930								
August	7,099	28,539	8.1	5,703	2.3	19,441	7.9	6,1
September	7,527	34,963	9.8	7,792	2.5	26,111	8.3	5,9
October	9,013	43,927	12.2	7,399	3.0	23,309	9.4	6,6
November	12,110	57,070	15.3	11,666	4.7	25,793	10.5	7,2
December	15,245	86,042	22.9	21,400	6.6	33,483	10.4	9,9
1931								
January	18,921	69,437	19.8	20,551	8.3	30,977	12.5	11,9
February	20,139	66,923	18.4	20,081	7.9	30,879	12.2	14,4
March	18,292	72,944	19.3	18,991	5.4	41,880	12.4	12,0
April	18,102	64,534	17.5	10,389	4.0	27,726	10.6	11,3
May	14,886	49,807	13.2	9,174	3.5	26,058	9.9	6,9
June	15,413	45,839	12.1	12,577	3.6	34,266	9.7	4,4
July	17,685	46,180	12.4	12,200	3.3	39,000	11.3	6,6
August	20,205	48,590	12.7	9,754	3.6	33,346	12.4	7,4
September	21,741	54,405	13.7	15,188	4.0	42,998	11.2	7,7
October	24,685	65,469	16.4	18,000	4.8	47,200	13.2	10,0
November	28,659	79,484	19.9	25,200	6.6	51,900	14.4	10,3
December	35,045	110,149	27.2	41,611	10.1	61,256	14.9	14,3
1932								
January	38,790	93,272	24.5	44,600	10.6	67,600	14.8	19,6
February	42,394	93,900	23.0	48,600	11.3	70,100	15.0	21,4
March	44,883	98,772	24.4	40,423	9.0	62,659	14.0	23,2
April	42,993	82,500	21.0	35,400	7.7	58,900	12.6	18,3
May	42,881	75,650	18.9	35,200	7.6	54,500	11.5	13,3
June	40,188	79,338	19.5	33,742	7.1	53,420	13.3	11,4
July	39,063	77,468	19.4					9,9

Unemployment Relief Through Building Loans in Stuttgart, Germany

ACCORDING to a report from Shiras Morris, American vic consul at Stuttgart, July 28, 1932, the Stuttgart city counci has recently approved a plan for relieving unemployment in the loca building trades by providing for loans at low rates of interest to build ing contractors who will agree to employ workmen now receivin relief payments from the city welfare office. The loans from th welfare office will make possible additional construction on whic employment will be given to laborers now receiving city relief pay ments. The loans will be equal in amount to the welfare benefit which the laborers employed in this way would receive from the city were they without employment and receiving relief payments from public funds. These loans will bear 1 per cent interest and will b repayable, into a sinking fund managed by the city, at the rate of per cent per year. In amount they may vary from 500 to 3,00 marks ($119 to $714) for 1-family houses with an additional 1,50 marks ($357) for each dwelling in excess of one in multifamily houses The Stuttgart Welfare Office is authorized to grant loans in the abov amounts immediately, but for enterprises involving greater amount of capital the approval of the finance division of the city counci must be obtained.

While construction projects of all kinds are eligible for these loans, it is expected that they will be availed of principally by contractors wishing to erect new houses of modest proportions and to renovate and modernize buildings erected before the war.

The loans will be granted only under the following:

1. Work thus financed must entail the employment of additional laborers and must cause a net reduction in the number of building workmen enrolled for relief payments in the city welfare office. Any contractor receiving a loan must be able to show that the gain in employment effected by his taking on additional workers will not be nullified by an equal loss caused by the forced discharge of other laborers either of his own or of other contractors.

2. Beneficiaries of the loans must pay to the laborers employed through them, the regular agreement rate.

3. Contractors must guarantee that the laborers will be employed at least one month.

4. The contractors who receive loans must employ only laborers resident within the city limits of Stuttgart.

It is believed that it will be relatively easy to enforce the administrative provisions outlined above, as the welfare office itself will be able to keep a constant check on the observance of them through its register of unemployed and as the laborers themselves will see that it is in their own interest to report any violation of the prescribed conditions.

In order to compute the savings to builders which are made possible through this loan program it must be kept in mind that the amount lent is the total benefits which the laborers thus employed would receive from the city welfare office were they unemployed and not the total wages which they receive from their employers in accordance with the regular agreed wage. The unemployment benefits are, of course, by no means equal to the current wages in the building trades. The former, while they vary a good deal depending upon the number of children and dependents and upon whether any other members in the family have employment, average about 80 marks ($19) per month. Wages in the building trades, however, fluctuate around 175 and 140 marks ($42 and $33) per month for skilled and unskilled labor, respectively. It can, therefore, be seen that the advantage which the Stuttgart contractors can obtain from this loan program will depend upon the proportion of unskilled to skilled laborers employed. The greater the proportion of unskilled laborers the greater the advantage. However, even should a case arise in which skilled labor was employed exclusively, almost one-half of the labor cost of the undertaking could be financed through the city welfare office at the favorable interest rate of 1 per cent.

Local contractors estimate that labor costs constitute on an average 30 per cent of building costs and, if this figure is applied to the above premise, it will be seen that Stuttgart entrepreneurs can obtain from the city welfare office at least 15 per cent of their building capital at 1 per cent interest.

Costs of materials.—To supplement the finance program described above and further to encourage local building, an additional loan of 2,500 marks ($595) at 2½ per cent interest, with 1 per cent sinking-fund arrangements, will be granted by the city of Stuttgart itself to any builder who employs local laborers exclusively in any construction

work. There are no other restrictions in connection with these loans, and they have been designed primarily to finance the purchase of building materials rather than to pay labor charges.

The above programs have been planned to operate independent of and in addition to any other indebtedness which local builders may have incurred in order to finance new construction and they may be obtained in all cases in which the mortgaged indebtedness on any unit does not exceed 90 per cent of its value. It is hoped by the Stuttgart Building Office that the low interest rate at which the loans are offered will encourage local building to such an extent that the number of laborers in the building trades now registered as public charges, viz 3,000, will be cut in half.

Voluntary Labor Service in Germany [1]

ON JULY 16, 1932, the German Government issued an emergency decree setting forth the general provisions governing the voluntary labor service.

The voluntary labor service was introduced in Germany in June, 1931, and the Federal Bureau for Employment and Unemployment Insurance was authorized to grant loans or subsidies to public bodies, such as counties, villages, etc., or other public or semipublic organizations wishing to institute public works under the system. Such loans were not to exceed that amount which was expected to be saved as a result of the decrease in the number of recipients of unemployment benefits. Projects were to be restricted to works of public value, especially the upkeep, improvement, and construction of roads, the reclaiming and improvement of land, and the laying out of lots for agricultural settlements as well as unemployed settlements and small gardens for the unemployed in the environs of industrial centers.

Recipients of unemployment benefits who volunteered for the service were kept on the books of the Federal Bureau and their time ran on just the same as if they had not been working at all. When their right to one kind of relief was exhausted they were automatically carried over into the next class of relief. For example, a worker who entered the service when he was on the register of the regular relief might, upon the termination of his service, be reentered on the extended benefit register, and a person on the latter register when he entered the service, might find himself a welfare relief recipient upon his discharge from the voluntary labor service.

The lack of specific Federal regulations governing the service has resulted in considerable variation in its application in the different sections of Germany and even in the same districts. Until now the Federal authorities have confined themselves to such matters as the financial promotion of the service, the designation of the organizations to institute the work, and the type of work to be performed. All other details, such as the actual selection of the projects to be undertaken, the selection of the workers, the assignment of jobs to workers, and the utilization of the workers' free time, were left to the organizations instituting the work or to the associations from whose rosters the workers were taken. The associations which up to the present have supplied most of the workers have been political organiza-

[1] Report of C. W. Gray, American vice consul at Berlin, July 22, 1932.

tions, such as the Stahlhelm, Reichsbanner, Jungdeutscher Orden, religious societies, especially Catholic ones, and sport clubs, such as the Deutsche Turnerschaft, the Sport Club Berlin, and similar clubs in other large cities.

The new regulations will make uniform the conditions surrounding the service.

Entry into the service gives the worker no special legal status but he enjoys the protection of the labor laws and of the social insurance system. From a national standpoint, funds are to come from two sources, the Federal budget and money advanced by the Federal Bureau for Employment and Unemployment Insurance. The latter organization is to contribute at least as much as is saved by the reduction in unemployment benefits paid to workers entering the service. Funds from both of these sources are to be uniformly administered.

In the selection of workers preference is to be given to persons at present receiving either the regular, the extended, or the welfare unemployment benefits. Persons under 25 are to be given preference. It is possible for workers to be credited on the Government books (*Reichsschuldbuch*) with a portion of their wages which later can be used to buy a small house and lot.

The service is to be placed in charge of a commissioner under the Ministry of Labor. The administrative machinery of the Federal Bureau for Employment and Unemployment Insurance will be utilized.

Results of Voluntary Labor System

DURING the first six months of the service, that is, until the end of February, 1932, the number of persons registered at the regional employment bureaus who had found employment under the system was 33,445. On April 30, 1932, the Federal Statistical Bureau reported that the number of persons registered on that date as members of the service was 37,967. Of this number 11,844 (31.2 per cent) came from the registers of the regular relief, 12,580 (33.1 per cent) from the unemployment relief, and the remaining 13,543 (35.7 per cent) were youthful unemployed entitled to no relief. In addition to the 37,967 persons mentioned above, there were 2,348 persons working in the service on the same date who had come from the registers of the welfare relief, supported financially by the local governments.

Of the 37,967 persons, 54 per cent were below the age of 21 and of the remaining 17,457 only a very small portion was above the age of 25.

By the middle of June, 1932, about 60,000 persons were enrolled in the service. No estimates are available as to the number at work now, but the opinion has been expressed that some 50,000 workers will find employment under the system during July and August. The latter figure amounts to approximately 5 per cent of the total number of youthful unemployed persons in Germany at the present time, the total of this category being about 1,000,000.

During the time that the voluntary labor service has been in operation the total number of unemployed in Germany has varied between 5,000,000 and 6,000,000 people. At best it seems that some

50,000 workers were enrolled in the service, which represents only 1 per cent of the total unemployed. They were not given steady jobs but worked on the average for only about 10 weeks each. It is, therefore, quite apparent that the voluntary labor service has not even scratched the surface of Germany's unemployment problem.

Period of employment and hours of labor.—Heretofore about one-half of the projects undertaken have given the workers employment for a period not exceeding 10 weeks. The official figures show that only 25.7 per cent of the persons employed up to the end of April, 1932, had been given work for a period longer than 10 weeks. The six or seven hour day has predominated up until the present throughout the service.

Kind and amount of work carried out.—During the half year ending February 29, 1932, there were 1,127 projects undertaken under the voluntary labor service system. About one-half of them had to do with work of a direct economic value, such as the improvement of farm land (198 projects), the laying out of lots for agricultural and suburban settlements and vegetable gardens for unemployed persons (75 projects), the construction, upkeep, and improvement of roads (144 projects), and the clearing of forests and similar work (approximately 300 projects). The remaining projects (43 per cent of the total) had to do with work of an indirect economic value, such as the construction of athletic fields, swimming pools, sanatoriums, aviation fields, etc.

Cost of work.—Approximately 800,000 marks ($190,400) [2] were spent out of Federal funds during the first six months of the service. Each member of the service cost the Government during that time 1.70 marks (40 cents) per day. It must be kept in mind that a part of this cost represents no additional expenditure on the part of the Government since in it are included unemployment benefits which otherwise would have been paid out to the individual members of the service whether they worked or not. Costs of raw materials, implements, supervision, and other operating expenses, are not included in the above sum since such costs are borne by the organization undertaking the work.

Book credits for workers.—It has already been mentioned that workers can be credited with certain sums by the Government with which to purchase houses and lots. Such entries would only be made when the wage of the voluntary worker exceeds that of the worker performing the same kind of labor outside the service. The amount of the book credit would be the difference between the wages of the outside and the service worker. Since it rarely happens that the wage of the service worker is more than that of the outside worker, practically no entries of this character have been made on the Government's books.

Changes Planned in System

THE former 6 or 7 hour day and the 10-week working period have been objected to by the Ministry of Labor and by private organizations sponsoring the service. In the first place, it is generally believed that a period of 10 weeks is by far too short to effect any considerable improvement in the material or moral well-being of the worker. It

[2] Conversions into United States currency on basis of mark=23.8 cents.

is also desired to shorten the working-day to five hours, with the idea of prolonging the working period by another two or three weeks and permitting a better use of the workers' spare time.

Under the present system only such projects can be considered as require a very short time for completion. It is claimed that public works of this kind are very scarce in Germany, all smaller projects of any importance having already been carried out.

The most essential change desired is the reorganization of the service in such a way as to extend the service to as many spheres of work and as many categories of unemployed persons as possible. This will be accomplished by the provisions of the new decree permitting funds for the voluntary labor service, under certain conditions, to be given to private companies and permitting the admission of unorganized unemployed persons to the service.

It is planned to divide the service in the future into two sections, the preparatory and the regular service.

The preparatory service is to last not less than 10 weeks and not longer than 20 weeks and is to be run along the lines of the old service with certain changes, such as the abolition of restrictions governing persons eligible to enter, the introduction of a compulsory minimum period of service before a member is allowed to withdraw, and the inauguration of the 5-hour day. The local organizations furnishing the personnel are to be responsible for drawing up a scheme offering the members the best mental and physical training in their spare time. This preparatory service is to offer unorganized youthful unemployed the necessary training to enable them to join the regular labor service.

The regular service, lasting 40 weeks, is the continuation of the preparatory service. Graduates, so to speak, of the preparatory service enter the regular service, but members of independent youth organizations, such as clubs, political and religious societies, can enter the regular service directly without going through the preparatory service. The kind of work done will not differ to any great extent from that done in the past, although it is planned to lay greater stress on projects having to do with the laying out of lots for agricultural and suburban settlements, and with the construction of roads and houses connected with such settlements.

Present plans call for the employment during the fiscal year ending March 31, 1933, of 100,000 persons in the preparatory service for a period of 20 weeks, and 50,000 persons in the regular service for a period of 40 weeks. Stated in another way, this means that 200,000 persons will be employed for 20 weeks, or 100,000 persons for 40 weeks. This will result in a total of 24,000,000 working-days, which at a cost of 2 marks (48 cents) per day, to the Government, an expenditure of 48,000,000 marks ($11,424,600). The Federal Government has earmarked 55,000,000 marks ($13,090,000) for the voluntary labor service during the present fiscal year.

The authorities estimate that each worker in the voluntary labor service will cost 3.50 marks (83 cents) per day, of which 1.50 marks (35 cents) will be borne by the organizations instituting the work, such as the villages, counties, etc., and will be expended for materials, tools, equipment, and supervision of the work. The remaining 2 marks (48 cents) will be provided by the Federal Government and will be spent for board, lodging, clothing, etc.; any amount saved out of this amount will be given to the workers as pocket money. Up to now there has

been considerable difference in the amount of pocket money given throughout Germany, but as a rule it has been 20, 30, or 40 pfennigs (4.8, 7.1, or 9.5 cents) per day.

Conclusion

IT IS quite apparent that the Federal Government attaches considerable importance to the voluntary labor service, not so much from the standpoint of the value of the work performed or the relief to the unemployment situation, but more from the standpoint of the physical and moral benefits accruing to young Germans, over whose spare time the Government can exercise a semicontrol during 20 to 40 weeks in the year. In this way the demoralizing influence of unemployment can be checked. The present plans, therefore, may be regarded as the first step toward the enlargement and expansion of the service. This is really the meaning of a rider which was attached to the emergency decree of July 16. This rider stated that the Federal commissioner of the voluntary labor service was, after sufficient experience had been acquired, to report to the Ministry of Labor concerning the development of the service and to give his views regarding the requisites for and the practical form of a compulsory service. The views of the Federal commissioner, according to the rider, will be published so that the public may have an opportunity to pass judgment upon them. It would, therefore, not be surprising if the present voluntary labor service develops into a compulsory service.

An Experiment with Voluntary Work of the Unemployed in England

THE Manchester Guardian, in its issue for August 18, 1932, gives an account of the use of unpaid work of unemployed men at Littleborough to preserve an old Roman bridge which had fallen into serious disrepair and was in danger of being entirely destroyed. The bridge, part of a Roman road from Chester to York, is looked upon as a particularly interesting relic, and a grant for its restoration was made by the Society for the Preservation of Ancient Monuments. A Rochdale society also contributed, and local firms made gifts of materials, tools, and cartage, while the unemployed gave their labor free. "As far as these men are concerned the only expense to the organizers has been the payment of their bus fares to and from work." Those entitled to unemployment insurance benefits continued to draw them while thus employed, and arrangements were made to provide insurance against the risks normally covered by employers' liability. The town is now considering further schemes for making use of such voluntary labor. "There is talk of laying out a park, digging a swimming bath, as well as of further archæological work. Unfortunately, there is labor enough for all three, for Littleborough is a town with about 26 per cent of unemployment."

The men are quick to see the advantage to themselves of an opportunity of keeping their hand in, so that, although they could not be paid anything for their work on the bridge, there were many more volunteers than there were places to be filled. After long unemployment it takes a man one or two days to regain his full working powers, and employers therefore prefer to engage men who

are not handicapped in this way at the start. Schemes like the present, therefor, help a man to keep or to regain his power of securing vacant jobs. Thus on the bridge scheme one young man of 26 has had his first spell of work since 1927. He has to-day a much better chance of finding another job than he had before. Apart from physical fitness, it is pointed out that the fact that a man has worked three weeks for nothing shows that he is a good and keen workman.

Unemployment Insurance and Unemployment Relief in Queensland in 1932

IN Great Britain, when the unemployment-insurance plan as originally designed proved inadequate to the severe and prolonged unemployment of the last decade, the framework of the plan was used for the administration of emergency relief independent of the original relation between contributions paid and benefits received. Queensland, faced with the same problem, maintained the basic conditions of its insurance plan, devised an entirely separate relief scheme for its destitute unemployed, and is now operating the two systems simultaneously. As the insurance scheme was not established until 1923, it had not time to build up a reserve adequate to the intensity and duration of unemployment in Queensland, but it was not till 1930–31 that its funds proved insufficient. The unemployment relief scheme is frankly a measure of public aid, supported by taxation.

Unemployment-Insurance Plan

THE unemployed workers' insurance plan, to give it its legal title, was enacted by the legislature in 1922, and became operative in March, 1923. It is compulsory, and covers all workers aged 18 and over, except for rural workers engaged in other than the sugar and pastoral industries, the employees of the Commonwealth (Australian) Government, and small groups of workers employed under Commonwealth awards. The act has been amended several times in matters of detail but its main features have not been changed.

Annual reports of its work are published, and from these the figures in the following pages have been taken.[1]

The insurance fund is made up of contributions, equal in amount, from the employer, the employee, and the Government. The contribution was originally 3d. (6 cents) per week for each employed worker from each party, but as the situation grew worse it was increased, and since July, 1928, it has been 6d. (12 cents)[2] per week from each. According to the district, weekly benefits range from 15s. to 17s. ($3.65 to $4.14) for the individual worker, male or female, unmarried or widowed, and from 24s. to 29s. 6d. ($5.84 to $7.18) for a married male worker supporting a wife. From 4s. to 5s. (97 cents to $1.22) a week is allowed for each child, up to four, under 16 years of age who is wholly supported by the recipient of the benefit.

A worker must have been insured for six months before being eligible for benefit. The maximum benefit period is 13 weeks in any one year, and this is payable only to those who have been employed for at least 26 weeks during the preceding 12 months. If the appli-

[1] Queensland. Unemployment Council. Annual reports on operations under the unemployed workers' insurance acts, 1922 to 1930. Brisbane, 1924–1931.

[2] Conversions into United States currency on basis of pound=$4.8665, shilling=24.33 cents, and penny=2.03 cents.

cant has been employed for less than 26 weeks, he is allowed benefits computed on the basis of one week's benefit for each two weeks of employment. There is a waiting period of two weeks after unemployment commences. In 1930 the act was amended to provide that a worker who had earned or otherwise received more than £220 ($1,071) during the preceding 12 months was not entitled to benefit under the unemployment insurance plan.

Finances of the Scheme

The contributions and benefits had been calculated on the basis of what had, up to that time, been a normal experience of unemployment, and it was expected that the plan would meet ordinary needs and build up a good reserve against any emergency which might arise in the future. Unfortunately the emergency came too soon. In an effort to meet it, the weekly contribution from each party was raised to 4d. (8 cents) in July, 1927, and to 6d. (12 cents) in July, 1928, while in 1930 the benefit period was cut from 15 to 13 weeks. The balance in the fund on June 30 of each year, 1924 to 1931, was as follows:

	Credit balance		Credit balance
1924	£124,395 ($605,368)	1928	£10,666 ($51,906)
1925	168,963 ($822,258)	1929	62,998 ($306,580)
1926	177,638 ($864,475)	1930	35,785 ($174,148)
1927	80,204 ($390,313)	1931	[3] 28,070 ($136,603)

It will be noticed that up to the close of the fiscal year 1925–26 the fund was adding to its reserves each year, but that since that date there has been but one year, 1928–29, in which income exceeded expenses. In 1930–31 it became necessary to borrow from the Government to meet the sustenance payments for which the fund was liable. The variations are shown more clearly by comparison of the annual receipts and expenditures.

TABLE 1.—ANNUAL RECEIPTS, EXPENDITURES, AND BALANCES, OF QUEENSLAND UNEMPLOYED WORKERS' INSURANCE FUND, 1926 TO 1931

[Conversions into United States currency on basis of pound=$4.8665]

Year ending June 30	Receipts		Expenditures		Credit (+) or debit (−) balance on year's work	
	English currency	United States currency	English currency	United States currency	English currency	United States currency
1926	£256,977	$1,250,579	£248,301	$1,208,357	+£8,676	+$42,222
1927	263,524	1,282,440	360,959	1,756,607	−97,435	−474,167
1928	342,682	1,667,662	412,220	2,006,069	−69,538	−338,407
1929	491,503	2,391,899	439,171	2,137,226	+52,332	+254,674
1930	490,568	2,387,349	517,780	2,519,776	−27,212	−132,427
1931	453,439	2,206,661	517,293	2,517,406	−63,854	−310,745

The effect of the increase in the contribution rates made in 1927 and 1928 is reflected in the sudden rise in receipts, but the increase in unemployment has prevented this rise from being as great as was expected, while at the same time it has meant a heavy drain in the way of benefit payments. Figures published in the Queensland Industrial Gazette for June, 1932 (p. 237), show that from July 1,

[3] Debit balance.

1931, to May 31, 1932, the receipts of the funds were £367,900 ($1,790,385) and the expenditures £360,455 ($1,754,154), giving a credit balance on the 11 months' work of £7,445 ($36,231), and reducing by that amount the debt outstanding against the fund on June 30, 1931.

The increasing severity of the depression not only increased the number of applicants for benefit, but rendered it necessary to pay out larger amounts to the individual applicant. The following figures show for the five years, 1927–1931, the number of applicants and the average amount of benefit drawn by each:

TABLE 2.—NUMBER OF APPLICANTS AND AVERAGE AMOUNT OF UNEMPLOYMENT BENEFIT IN QUEENSLAND, 1927 TO 1931

[Conversions into United States currency on basis of pound=$4.8665]

Year ending Mar. 31—	Number of applicants	Average amount paid per applicant	
		English currency	United States currency
1927	48,980	£6.36	$30.95
1928	52,226	7.22	35.14
1929	56,160	7.48	36.40
1930	55,903	8.05	39.18
1931	65,547	8.10	39.42

Incidence of Insurance Liability, by Industries

In Queensland, as in Great Britain, the great burden of unemployment is confined to relatively few industries, though the incidence differs in the two countries. In Great Britain, for instance, coal and textiles make excessively heavy demands on the insurance scheme, while in Queensland the amount paid to textile workers is almost negligible, and coal miners in 1930–31 received less than 4 per cent of the total benefit expenditure. The annual report of the work for 1926–27 calls attention to the fact that applicants for benefit during the year ending March 31, 1927, were distributed throughout 45 industry groups and that "73.8 per cent of the total sustenance paid was drawn by nine of these groups." These groups, and the proportion of the total benefit paid which was drawn by each during five consecutive years, are shown in Table 3.

TABLE 3.—PER CENT OF TOTAL UNEMPLOYMENT BENEFIT DRAWN BY SPECIFIED INDUSTRIES IN QUEENSLAND, 1927 TO 1931

Industry group	Year ending Mar. 31—				
	1927	1928	1929	1930	1931
Building	4.8	8.1	7.7	8.2	10.8
Local authorities and main roads commission	5.7	6.6	7.4	8.1	7.6
Meat export	7.6	4.7	6.0	5.8	2.9
Metalliferous mining	3.1	3.4	1.6	1.4	1.8
Pastoral (cattle and sheep)	7.7	6.8	6.2	6.1	6.6
Railways (construction and maintenance)	9.1	8.4	7.4	8.5	4.9
Shearing	3.8	3.2	3.5	3.7	3.3
Sugar (field and mill workers)	23.3	17.0	19.0	20.8	19.2
Waterside workers	8.7	7.6	10.3	8.7	7.1

It will be noticed that throughout this period the sugar industry has made the heaviest demands upon the scheme, its share of the total benefit paid varying from about one-sixth to nearly one-fourth.

General Conclusions

Reviewing conditions at the end of the fiscal year 1930–31, the unemployment council concluded that the scheme had justified itself, though unable to meet the full needs of the situation. In times even approaching normal, it had proved that the rates of contribution were sufficient to pay reasonable benefits and to build up a fund for abnormal times, and though in the present emergency it had become necessary to establish special relief funds for those who had exhausted their benefit rights, nevertheless these benefit rights served a valuable purpose.

It is difficult to provide by means of relief works employment of a nature other than laboring work, hence persons employed in callings demanding manual skill or professional experience when unemployed would be drafted into the ranks of the unskilled. Unemployment insurance has provided a breathing space in which these workers and female employees could seek reabsorption in callings in which they have their greatest value. In normal times unemployment insurance has served to uphold the morale of the worker by relieving him of the necessity of relying on either private or public charity.

Queensland's Unemployment Relief Scheme

TOWARD the end of the last decade unemployment increased very rapidly in Queensland. In January, 1927, the registered unemployed numbered 11,132, and the largest number recorded during the year was 11,761 in February. For the next three years the figures of the January registration were, respectively, 12,737, 15,884, and 20,138. At this point it was felt that measures must be taken for relief, and a special tax for unemployment relief was deemed the best way of meeting the situation. A tax of 1¼ per cent was imposed on practically all income, including wages, with such minor exemptions as savings-bank interest, invalidity and old-age pensions, workmen's compensation payments, war pensions and gratuities, State children's allowances, unemployment insurance payments, and Government rations.[3]

The administration of this act, passed in July, 1930, was placed in the hands of the Minister of Labor and Industry. He was given authority to use whatever amount he thought fit for the relief of unemployment and of distress among female workers, but apart from this, the fund could be used only to aid local authorities in providing relief works "wherever their necessity might be indicated by the number of unemployed in the various centers of the State." The work was begun in May, 1930, with money advanced by the treasury to prevent the necessity of waiting for legislative action. The first annual report of the work, recently issued, covers the year ended June 30, 1931, and gives some details of the various methods used.[4]

General Features of the Scheme

Relief works were first instituted in Brisbane, with a working week of 44 hours and a wage of £3 ($14.60) weekly to married men and of

[3] For details, see Labor Review, November, 1930, p. 45.
[4] Queensland. Department of Labor and Industry. First annual report upon the operations and proceedings under "The income (unemployment relief) tax acts of 1930," for the year ended June 30, 1931. Brisbane, 1931.

£2 10s. ($12.17) to single men. At the beginning 1,000 men were employed, taken only from among those who had been forced to apply for the Government rations—in other words, for outdoor poor relief. It was found, however, that withholding relief from other needy unemployed persons simply resulted in their becoming destitute and having to suffer the embarrassment of making for the first time in their lives application for Government ration relief.

It was therefore decided to waive the stringent application of the original condition, and to employ on relief work any genuinely unemployed person, giving first preference to the most needy cases and men with the largest families, and reserving the right of single men to be employed in the proportion of one to four married men. Within the course of a few weeks the number of unemployed persons on relief work rapidly rose throughout the State until at Christmas time a maximum of approximately 8,000 men were engaged on various works, and earning at the rate of £3 married, and £2 10s. single men.

This constituted too heavy a drain on the resources of the fund, and what was called a rotation plan was adopted, under which a man who had worked 12 weeks was laid off and replaced by a new applicant. This made it necessary for the "rotated" men to apply again for the outdoor poor relief, for which no work in return was demanded. To avoid this, in March, 1931, a plan was adopted known as the intermittent relief work scheme and was paid for out of the fund raised by the unemployment tax. Under this plan work is provided for men with dependents, the amount of work, and therefore of relief, varying in proportion to the number of dependents. The range of relief given was from 17s. ($4.14) a week for a man with no dependent but a wife, and 21s. 6d. ($5.23) for a man with wife and one child under 14 (this age was afterward raised to 18) to 44s. ($10.71) a week for a man with a wife and 8 dependent children.

By the inauguration of the intermittent relief scheme the cycle of relief work has so far been completed. After having finished their rotation on the ordinary relief work, eligible men are now simply drafted to the intermittent relief work, and their places either taken by men on intermittent relief work or by other necessitous unemployed. In this way the most needy men are given a permanent interest by providing them with at least some work during every week of the year, and the general opinion is that this continuity of work has resulted in a distinct improvement in the outlook of all the men concerned.

Some minor measures were taken in respect of unemployed women and girls. An unemployed female, regardless of age, may be included in the relief family of an intermittent worker, and the latter's weekly amount of work increased proportionately. Some work has been given girls in making up garments of all kinds for the unemployed, and women living alone have been helped by various devices. In general, however, work for unemployed women does not seem to have been conducted on any large scale.

Finances of the Scheme

It had been calculated that the tax imposed would raise about £800,000 ($3,893,200) during the first year, but as it did not become operative until the beginning of August, the amount received fell short of this. From August 1, 1930, to June 30, 1931, receipts totaled £702,640 ($3,419,398) and expenditures, including repayment of the initial loan from the treasury, reached £700,112 ($3,407,095), leaving a cash balance on hand of £2,528 ($12,303). In general, the director reports, the tax has been paid willingly, and all concerned have cooperated to make the plan effective.

Kinds of Employment Furnished

A great part of the work provided is along the customary lines of made jobs, but several plans of a constructive character are being tried out. Experimentation is hampered by the fact that the fund may not be used for a program of public improvements, but only for the direct relief of unemployment. Land settlement, it was felt, offered the most promising field for really effective work, and though this could not be undertaken directly, it might be approached under the terms of the act, and at the same time, another puzzling problem might be solved.

Intermittent Relief Work Camps

The question of rent had been difficult from the first. The Government did not, for obvious reasons, wish to pay it from relief funds, but it could not be ignored permanently. The matter was most acute in the case of intermittent relief workers, whose pay was smaller than that of men on regular relief work, so the Government finally offered to send intermittent workers to any local authority who could use them provided the authority would furnish suitable housing and keep it in sanitary condition.

The general principle underlying the scheme is that men on intermittent relief work whose wages are aready paid out of the trust fund should be transferred to huts provided by any local authority who so desires, and in return the local authority should have the benefit of the work given such men under the intermittent relief scheme and paid for by the Government. In this particular arrangement each contracting party benefits—the Government by partly solving a vexed problem without extra cost other than the cost of transport, the local authority by procuring the services of men for an indefinite period in return for huts provided at a cost of some £10 [$48.67] to £12 [$58.40] and the unemployed by procuring house room free of cost in congenial surroundings until such time as the procuring of normal work puts an end to their rent difficulties.

The arrangement, of course, is entirely voluntary on both sides. By the end of June, 1931, six camps of this kind had been set up and others were in process of formation. Some 60 families, with approximately 180 children, had been transferred and the number seemed likely to increase as the plan became known. It was hoped, also, that the families could be encouraged to grow their own vegetables, perhaps to raise a few chickens, and eventually to aid considerably in their own support.

Other Projects

Another scheme consisted of clearing, by means of otherwise unemployed workers, 130 acres of land and putting it in condition for an experiment in tobacco growing on a commercial basis. Reafforestation gave employment to a number.

During the year * * * 828 acres were planted with 562,000 softwood seedlings; 1,194 acres of forest plantation were tended and cleaned; 20,495 acres of natural forests were improved; 147 miles of fire lines were constructed and maintained; 5 miles of fence were erected; 6 miles of roads were constructed into the forest areas; 513 acres of scrub were felled for plantation purposes; 130 acres of maize were planted as cover crops for young seedlings; and to provide for future plantings, 1,101,000 seedlings were raised and tended in nurseries. The whole of this work was accomplished by unemployed men under the relief scheme at a total expenditure of £17,186 [$83,636].

As in New Zealand, a number of men were subsidized to carry on prospecting throughout the State, other minerals being sought as well as gold. Road making was carried on extensively; airplane

landing grounds were cleared and prepared; drainage schemes were carried through; and work was accomplished on irrigation and water conservation plans.

Plans for 1931–32

At the close of the fiscal year covered by this report the unemployment situation was so serious that the unemployment relief tax was increased, for the coming year, to 6d. (12 cents) in the pound ($4.87) on all incomes of £104 ($506) and over, and attention was given to the matter of preparing the youth for greater employability in the future. In October, 1931, a farm training scheme for boys was begun, under which successive groups of 25 boys would be trained for work on the land. In the same month a vocational training scheme for 1,000 boys was inaugurated, giving a six months' training in leather working, sheet-metal working, woodworking, cement work, and house painting. A scheme was also under way for training 500 girls, aged from 15 to 20, in domestic science.

LAND SETTLEMENT

Homestead Experiments in Puerto Rico

A STUDY, dealing with child health and welfare in Puerto Rico, was undertaken by the American Child Health Association in 1930, at the request of the President of the United States. In the published results of this investigation considerable space is devoted to the efforts of the Puerto Rican Government to establish small settlements or homesteads.[1]

The report notes that at one time Puerto Rico was the home of small landowners. With the advent of the great moneyed interests to the island, the small land holdings were absorbed by degrees into the large tobacco and sugar plantations, and most of the owners of the many small farms, which have gradually disappeared, have become seasonal laborers on the big agricultural undertakings.

Homestead Commission

ORIGINALLY Puerto Rico had its crown lands, inherited from the Crown of Spain, but a great portion of them had been leased to big owners for a considerable period. With the view of developing these crown lands into small farms for the Puerto Ricans, the 1921 legislature created a homestead commission,[2] under the patronage but not under the control of the Department of the Interior, the ex officio chairman being the commissioner of that department. The membership of the commission includes the commissioners of health, agriculture, and labor, and four others appointed by the governor. The commission was authorized to develop other areas to be used both as urban settlements for providing adequate and reasonably priced housing for artisans and workers (in some cases houses and lots; in other instances, lots only) and also for the establishment and development of farm homesteads. The general scheme is to charge anyone taking over homestead property a monthly or tri-monthly payment for 10 years. With some legal restrictions at the close of such period, the homesteader becomes the owner of the property he has lived on and developed. Such land can be neither transferred nor sold except to another homesteader, unless the whole commission approves. This restriction is to prevent the absorption of homesteads into large land holdings.

Since the first homestead act became operative approximately $950,000 has been available from budget appropriations and Government funds as a revolving fund for purchasing homesteads. The commission has also drawn overhead expenses from this fund for the building of schools, roads, and water supplies on homestead acreages, as well as expenses for general administration, as prior to July, 1930, no regular appropriations were available for these purposes.

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[1] American Child Health Association. An inquiry into the health, nutritional, and social conditions in Puerto Rico as they may affect children. New York, [1931?].

[2] For previous article on activities of this body, see Labor Review, May, 1926 (pp. 101–103).

Land appraised at $1,242,081 has also been turned over to the commission to use as homesteads.

On July 1, 1930, the rural homesteads consisted of: Acreage, 12,643; appraisal value, $147,687; number of farms, 1,052; number of persons living on homesteads, 3,858. Urban homesteads consisted of: Houses and lots supplied by commission—San Juan, 492—Arecibo, 125—total, 617. Lots for lease only (homesteaders to build their own houses)—Arecibo, 100; San Juan, 500; Guaynabo, 300; Salinas 97—total, 977 [sic].

First Rural Experiment

AT THE time the report under review was prepared the rural homesteading experiment dated back 9 years. It was undertaken on a tract near Vega Baja, 261 acres of which the commission divided into plots of little less than 2 acres each. During the 9-year period some homesteaders were not able to pay the required amounts for the land and had to relinquish it. If the man who had the adjoining homestead applied for such relinquished land he was permitted to add it to his acreage. The remainder of the land devoted to this pioneer experiment was used as follows: 1 acre for a school; 1 acre for the insular police; one-half acre for the water reservoir; 16 acres for a demonstration farm for the department of agriculture; and the rest for roads.

The homesteaders on the project near Vega Baja have had to resort to various activities to add to their income because, although their land provides their food supply, it does not furnish an adequate living. Among these men are storekeepers, barbers, carpenters, masons, and public chauffeurs.

There are 800 people living in 93 families covered by this experiment.

Agriculture is being taught on the small demonstration farm and the municipality has built a 2-room school house which is used by both the homestead children and other children in the neighborhood. The municipal health department has inoculated the homesteaders against typhoid and given them hookworm treatment.

Other Rural Homesteads

ALL the other rural homesteads are more isolated than the one at Vega Baja and present three outstanding problems.

Marketing.—The entrance to the homestead near Morovis, for example, is approximately a mile from the main road.

Many of the homesteaders, however, live 3 or 4 miles within the homestead proper. Their crops are conditioned, therefore, by what they need for their own food supply and by what they can easily sell. Each homesteader takes his own small crop out to the roadside and sells it for whatever the store or some itinerant purchaser will give. The commission is developing plans to mitigate against this "hand to mouth" selling.

Last spring an American canning factory supplied pepper and gandula seeds to the field director, who distributed them among the homesteads. In the fall each homestead area will deliver its crop to some point on the main road to be picked up by the canning factory truck at a price already agreed upon. The homestead commission and the newly created department of commerce have recently developed a plan of cooperative marketing for homestead crops.

Education.—On many rural homesteads school facilities are not available. In the Morovis section there are possibly 100 children of school age, and the nearest primary school is perhaps 2 miles from the entrance to the homestead and is overcrowded. Ten homesteads are reported as having 1 school each and 1 homestead as having 2 schools. There are 650 children in a group of homesteads which have no schools.

Health.—Isolated homesteads have not the advantages of health facilities. Approximately 60 per cent of the rural homesteaders have latrines. Most of the families have been given hookworm treatment.

Urban Homesteads

HOMESTEADING was not begun, however, in rural regions of the island, but in the city of San Juan. For years economic hardships have been driving the people into the cities to look for jobs. They have "squatted" on any rent-free land that was available in city slums where moral conditions and sanitation were extremely bad. In the mangrove swamps they have also constructed 1-room shacks out of tin cans and refuse from city dumps. The health department policed these unsuitable localities to prevent the putting up of such shelters, but this merely resulted in these people doing their building at night. Finally, recourse was had to night guards. As an outcome of these conditions in 1921 the homestead commission started its urban homestead project. It borrowed $750,000 from the insular government and bought from private individuals the land in the suburbs of San Juan, which the government had used for a training camp during the war. This was the beginning of the workmen's barrio (Barrio Obrero), which is divided into a concrete zone and a lumber zone. In the former only concrete houses valued at $1,500 or over are built; in the latter, houses of not less than a finished value of $200 may be erected.

The rest of the 500 houses have been built by families purchasing the land under the same conditions that the rural homesteaders are owning theirs. The average lot is 200 square meters and is sold for $300 to $500, without interest or taxes until paid for. As in the rural zone, a person who owns other property can not become a homesteader. At the present time more than 500 applicants wait to purchase these lots and no lots are available. Before the hurricane the net return to the commission from this project was $5,500 monthly. Lack of employment has slowed payment down to $3,000 or $4,000 a month. Four hundred and ninety-two families live in this barrio, and only nine cases of arrears in payment are pending in court.

Beyond the barrio, acres of mangrove swamps are being filled in with a view to future sales. The government is also disposing of waste swamp lands in small lots for $10 cash each to any one who will fill them in above the level of the tide and build upon such reclaimed land.

Rude shelters built by squatters along the ocean front at Arecibo have been condemned by the commission, which has subdivided a tract on the high land 2 miles from the city. Land is also being reclaimed and housing improvements made at Cantano, a small workmen's community across the bay from San Juan.

Summary of Results

AT THE time of the preparation of the report here summarized, 1,052 rural Puerto Rican families were living on homesteads. Important among the accomplishments in this connection are: The utilization of waste land; the proving that men can make a living on this land with the aid of expert supervision in crop control; the showing that men desire to earn their living and support their families if the opportunity is offered; and the teaching of the value of saving money to homesteaders, in order that they may meet their installment payments on their land holdings.

In April, 1931, the homestead commission was authorized by an act of the legislature to issue bonds of the People of Puerto Rico up to the amount of $500,000 to be expended by that commission in acquiring and purchasing lands for the creation of agricultural farms under the homestead act, thus reducing the cost of living and helping to solve the problem of unemployment. Furthermore, a bill has passed the legislature appropriating the sum of $100,000 a year from the insular treasury funds from 1930 to 1940 "for the purpose of acquiring lands by purchase from corporations, partnerships, and private persons; of dividing said lands into agricultural farms for lease with the right to ownership; of providing them with seeds, agricultural implements, homes, and a system of markets for the fruits they produce; of employing technical personnel to teach the best methods of cultivation, attention, and maintenance of said farms, under the system and provisions of the act creating the homestead commission." Such appropriation is, however, only available to the commission when other budget appropriations have been met by the insular treasury.

To many persons interested in the future progress of Puerto Rico the return of the small farmer to the soil as landowner is one of the most constructive measures undertaken for the well-being of that island.

Settlement of Unemployed Workers Upon Land in Estonia

ACCORDING to the August, 1932, issue of Meie Tee, a monthly published by the Estonian Educational Society (New York), the Estonian Government, through the Ministry of Agriculture, is making the first experiment in that country in settling families of urban unemployed workers upon the land as small farmers. The first group to be settled consists of 80 selected families; these will occupy a tract of good farming land of over 1,000 acres.

The clearing of land and the necessary improvements, such as roads, ditches, fences, buildings, etc., are to be made by the unemployed workers themselves under the direction of the Government experts. The necessary expenses for the improvements and the wages to the unemployed workers engaged on improvements are advanced out of the public unemployment relief funds.

PRODUCTIVITY OF LABOR

Man-Hour Productivity in the Lumber Industry in the Pacific Coast States in 1929

DATA regarding man-hour rates of production for certain industries were collected by the Bureau of the Census in its biennial census of manufactures for 1929. With the permission of that bureau, a summary of the blast-furnace industry was published in the Labor Review.[1] The present article, the second of this series, covers the lumber and timber products industry for 1929 in California, Oregon, and Washington. The same method of tabulation used heretofore has been followed in this study.

The number of man-hours worked by the wage earners [2] in an establishment in the lumber and timber products industry was obtained by the census through a supplemental schedule sent only to establishments which reported products valued at $100,000 or more. Only large mills, therefore, are covered herein.

The tabulations show that efficiency, as measured by man-hour productivity, depends more upon the extent of mechanization, and possibly wages paid, than upon such factors as size of plant. In fact, it decreases with size of plant as measured by number of wage earners employed, especially for those mills which produced their own logs. Productivity does not seem to increase with size of mill as measured by either number of wage earners employed, aggregate output, or even aggregate horsepower, although for those mills which bought their logs, there is some increase in productivity with increase in size of mill as measured by aggregate output.

On the other hand, it is influenced by certain factors. The high-wage mills, those which paid the highest hourly wage, sawed, on the average, about 40 per cent more lumber per man-hour than did the low-wage mills, but only about 30 per cent more per wage earner. The average wage cost per thousand feet of lumber sawed was much lower in the case of the high-productivity mills than of the low-productivity mills.

Classification of the mills on the basis of horsepower shows that efficiency depends little upon quantity of available horsepower but considerably upon the horsepower available per wage earner employed; in fact, the factor most reliable as an indicator of efficiency in this industry is horsepower per wage earner, the increase in productivity with increase in horsepower per wage earner being appreciable. Moreover, the wage cost per thousand feet sawed is perhaps a trifle smaller in the case of those mills with much horsepower per wage earner than in the case of those with little horsepower per wage earner.

[1] August, 1932, pp. 260–267.
[2] The term "wage earners," as used by the Bureau of the Census, includes piece workers as well as time workers but does not include salaried officers and salaried employees.

Scope of Study

THE only convenient measure of the physical output of the lumber industry is the board foot, and for the number of board feet sawed to be a measure of the labor performed, the mills must work on logs that are comparable as to size and hardness and the output comparable as to size. The logs sawed by the large mills in the three Pacific Coast States are fairly uniform as to size and hardness, the kind of wood used being largely Douglas fir, Western pine, and redwood.[3] It is assumed also that the mills were comparable as to size of product. Although each mill may produce some large timbers and some small sizes, it is probable that the relative output of any specific size is about the same in each of the mills, i. e., the percentage of the total production represented by any one size of product is approximately the same for all.

In order to make the data fully comparable, the plants were also selected on the basis of (1) the amount of millwork performed upon the rough product, and (2) whether they bought or produced the logs they sawed. Mills selling an appreciable portion of their products in the forms of lath, shingles, veneers, doors, sash, window and door frames, moldings, and boxes were omitted from the tabulations. Those mills which were included sold at least 90 per cent of their products, on the basis of board feet, either as rough or dressed lumber (the latter including flooring, ceiling, partition or siding). The quantity of lumber sold in the rough state was 63 per cent of the total production in the case of those mills which purchased their logs, and 47 per cent in the case of those which produced the logs they sawed. A considerable quantity of lumber, therefore, was dressed in the mills, but this was more or less true of all the mills in each of the two groups tabulated.

As to the source of the logs sawed, one group of mills, 47 in number, purchased all their logs or produced less than 25 per cent of the logs sawed; in fact, only a very few mills included in this group produced any logs at all during the year, and the average production of logs per mill was negligible. The other group of mills, 46 in number, produced 75 per cent or more of the logs sawed. The report for any mill producing logs included data as to the wage earners and the man-hours worked in the logging camp as well as the wage earners and the man-hours worked in the mill proper. Many of the mills which produced their logs sold small quantities in log form. The output of each mill, as used in the tabulations, was based upon the output of lumber rather than of logs. The labor used in the production of the logs sold, therefore, was in excess of that necessary for an establishment to produce its output of rough lumber, including the logging operations necessary for this output. For this reason, for these establishments the number of wage earners and number of man-hours worked were somewhat too large in relation to the output, but no correction was attempted because the quantities of logs sold as such equaled only a few per cent of the total production.

In view of the fact that the reports of the 46 mills which produced their logs included also the wage earners and man-hours of the logging

[3] A few mills were omitted from the tabulations because most of their products were hardwoods, and generally of special small sizes such as is used in the manufacture of furniture.

camps, the productivity of these mills, in board feet per man-hour or per wage earner, was much less than that for the 47 mills which bought their logs. The relative productivity per man-hour for the first group was only 39 per cent of that for the second, the actual figures being 51 board feet for the first against 129 for the second; and the corresponding figure for productivity per wage earner during the year was 42 per cent, being 123,000 board feet against 294,000.

Although the 93 establishments covered by the present study represent only a small percentage of the 1,528 establishments in the industry in these three States, the output covered is quite representative of the total production of the industry in the area, being 4,088,629,000 board feet, or 29 per cent of the total of 14,149,301,000. The corresponding percentages covered for the individual States are: California, 20; Oregon, 42; and Washington, 23.

Trends of Productivity

Productivity, by States

TABLE 1 shows averages of output, wages, and horsepower in each of the three States for the two groups of mills—the 47 which bought their logs, and the 46 which produced the major part of their logs. The "wages" item is based on the aggregate amount of compensation paid during the year to all wage earners of an establishment. This, divided by the year's output, gives the wages per thousand feet of lumber sawed; and the "wages per man-hour" are obtained by dividing the aggregate wages by the total number of man-hours worked. The "horsepower" is the sum of the rated capacity of the prime movers plus that of the electric motors driven by purchased energy. The power of electric motors run by energy generated in the establishment, if any, is omitted since to include such motors would result in a duplication of some of the power originating with the prime movers proper.

TABLE 1.—AVERAGE OUTPUT, WAGES, AND HORSEPOWER IN SELECTED LUMBER MILLS, BY STATES, 1929

Class of mills and State	Number of establishments	Average number of wage earners	Average output of lumber (in thousand board-feet)			Wages		Average horsepower [1]			
			Per establishment	Per man-hour	Per wage earner	Per 1,000 feet sawed	Per man-hour	Per establishment	Per 1,000 feet sawed	Per 1,000 man-hours	Per wage earner
							Cents				
Mills buying their logs:											
California	2	76	16,166	0.084	213	$7.53	63.1	438	0.027	2.27	5.8
Oregon	13	244	71,210	.129	292	4.41	56.7	2,355	.033	4.26	9.7
Washington	32	146	43,822	.131	300	4.57	59.8	1,778	.041	5.31	12.2
Total	47	171	50,220	.129	294	4.55	58.6	1,880	.037	4.83	11.0
Mills producing 75 per cent or more of their logs:											
California	11	378	34,599	.035	92	15.36	53.3	2,068	.060	2.08	5.5
Oregon	25	307	43,991	.062	143	9.46	58.3	2,179	.050	3.05	7.1
Washington	10	217	24,791	.052	114	12.04	62.2	1,122	.045	2.34	5.2
Total	46	305	37,571	.051	123	11.13	57.2	1,922	.051	2.63	6.3

[1] Rated capacity of prime movers plus that of electric motors driven by purchased energy.

In the first group of plants the data for California cover only two mills, and the averages for each of the other two States, although representing a satisfactory number of establishments, are, in general, about equal in value; the figures, therefore, can not be depended upon to reveal accurate trends induced by the factors affecting productivity. For the group of mills which produced their logs, 10 or more mills were tabulated for each State, and for this reason accurate trends are probably indicated. The most outstanding point shown for this group is in connection with wages and output. California, represented by 11 mills, ranks lowest in wages per man-hour, highest in wages per thousand feet of lumber sawed, and lowest in output per man-hour. Oregon, on the other hand, is lowest in wages per thousand feet of lumber sawed, highest in output per man-hour, but second (somewhat less than Washington) in wages per man-hour.

The cause of this range in productivity seems to be a matter of mechanization. California, with the lowest productivity, is highest in average number of wage earners employed and is only slightly in excess of the smallest in respect to horsepower per wage earner. On the other hand, Oregon, ranking highest in productivity, ranks also the highest in respect to horsepower per wage earner. These observations are confirmed by Table 2, in which the several establishments are classified in respect to each of six factors of productivity without regard to their geographical location.

Productivity, by Size of Plant

TABLE 2 classifies the two groups of establishments according to number of wage earners employed, output in thousand feet of lumber produced, output per man-hour, average hourly rate of wages, horsepower, and horsepower per wage earner. In each case the figures are averages per establishment.

Number of wage earners employed.—As shown in the first section of the table, the output per establishment for the 47 mills which purchased their logs ranged from 16,793,000 feet in the 13 mills with fewer than 100 wage earners (actually averaging 50 wage earners each) to 105,785,000 feet in the 8 mills with 300 wage earners or more (averaging 364 wage earners each). A tendency to decrease with increase in size of plant is shown by the figures in the last two columns on output, two on wages, and the last three on horsepower. Moreover, in the case of the three columns giving horsepower rates, the decreasing tendency is rather pronounced. The cause of the lower efficiency of the larger mills in relation to that of the smaller mills is not definitely shown by these figures, but it is to be noticed in this connection that the output of the largest group of mills is 6.3 times that of the smallest group, whereas the corresponding ratio for the horsepower is only 3.8. Apparently, a larger percentage of the work was done by manual labor in the large mills than in the small ones.

TABLE 2.—AVERAGE OUTPUT, WAGES, AND HORSEPOWER IN SELECTED LUMBER MILLS, CLASSIFIED ACCORDING TO SIZE, 1929

Mills buying their logs

Size classification	Number of establishments	Average number of wage earners	Average output of lumber (in thousand board feet)			Wages		Average horsepower [1]			
			Per establishment	Per man-hour	Per wage earner	Per 1,000 feet sawed	Per man-hour	Per establishment	Per 1,000 feet sawed	Per 1,000 man-hours	Per wage earner
							Cents				
Number of wage earners:											
Under 100	13	50	16,793	0.145	336	$4.15	60.1	827	0.049	7.14	16.5
100 to 199	20	145	40,930	.124	282	4.80	59.3	1,613	.039	4.87	11.1
200 to 299	6	258	79,529	.134	308	4.60	61.6	3,341	.042	5.62	12.9
300 and over	8	364	105,785	.128	291	4.37	56.0	3,165	.030	3.83	8.7
Output (in thousand board feet):											
Under 20,000	8	41	10,226	.113	249	5.00	56.7	439	.043	4.87	10.7
20,000 to 49,999	21	120	34,769	.126	290	4.66	58.8	1,434	.041	5.20	12.0
50,000 and over	18	288	86,022	.131	299	4.47	58.7	3,042	.035	4.65	10.6
Output per man-hour:											
Under 100 feet	9	155	30,395	.085	196	6.38	54.5	1,490	.049	4.18	9.6
100 to 149 feet	24	193	56,512	.125	293	4.52	56.5	2,081	.037	4.61	10.8
150 feet and over	14	142	52,179	.172	367	3.91	67.2	1,787	.034	5.89	12.6
Wages per man-hour:											
Under 50 cents	8	172	43,253	.104	251	4.40	45.7	1,545	.036	3.71	9.0
50 to 59.9 cents	19	179	51,334	.124	287	4.58	56.9	1,881	.037	4.54	10.5
60 cents and over	20	161	51,949	.146	323	4.56	66.7	2,014	.039	5.67	12.5
Horsepower in each establishment [1]:											
Under 1,000	15	67	20,698	.132	309	4.86	64.1	577	.028	3.67	8.6
1,000 to 2,999	24	189	53,094	.125	281	4.61	57.7	1,797	.034	4.23	9.5
3,000 and over	8	310	96,953	.135	313	4.30	58.1	4,573	.047	6.37	14.8
Horsepower [1] per wage earner:											
Under 10	28	184	52,696	.124	286	4.76	58.8	1,401	.027	3.29	7.6
10 to 19.99	13	160	47,776	.137	299	4.17	57.0	2,211	.046	6.32	13.8
20 and over	6	132	43,981	.146	333	4.24	61.9	3,403	.077	11.28	25.8

Mills producing 75 per cent or more of their logs

Number of wage earners:											
Under 100	12	68	10,082	0.067	148	$9.00	60.0	431	0.043	2.85	6.3
100 to 199	12	149	19,437	.060	130	9.79	59.1	724	.037	2.25	4.9
200 to 399	9	264	30,590	.049	116	11.83	57.8	1,306	.043	2.09	4.9
400 and over	13	695	84,518	.049	122	11.47	56.5	4,832	.057	2.82	7.0
Output (in thousand board feet):											
Under 20,000	21	108	12,163	.052	113	10.85	56.7	495	.041	2.13	4.6
20,000 to 49,999	12	240	30,461	.051	127	11.06	56.5	1,297	.043	2.18	5.4
50,000 and over	13	682	85,178	.051	125	11.22	57.6	4,805	.056	2.90	7.0
Output per man-hour:											
Under 50 feet	19	360	33,519	.037	93	14.48	53.4	1,947	.058	2.14	5.4
50 to 79 feet	20	327	48,857	.065	149	9.38	60.5	2,437	.050	3.22	7.5
80 feet and over	7	90	16,327	.097	181	7.36	71.5	385	.024	2.29	4.3
Wages per man-hour:											
Under 50 cents	11	267	29,370	.046	110	9.95	45.3	1,557	.053	2.42	5.8
50 to 59.9 cents	12	377	37,802	.039	100	13.54	53.4	2,417	.064	2.52	6.4
60 cents and over	23	285	41,373	.063	145	10.38	65.8	1,839	.044	2.82	6.5
Horsepower in each establishment [1]:											
Under 1,000	22	122	14,882	.055	122	10.81	59.5	453	.030	1.67	3.7
1,000 to 2,999	17	313	38,817	.051	124	11.11	57.0	1,745	.045	2.31	5.6
3,000 and over	7	861	105,852	.050	123	11.29	56.5	6,972	.066	3.30	8.1
Horsepower [1] per wage earner:											
Under 5	20	255	26,359	.042	103	13.40	56.0	917	.035	1.45	3.6
5 to 9.99	23	338	42,790	.054	127	10.60	57.5	2,308	.054	2.93	6.8
10 and over	3	382	72,305	.076	189	8.01	60.7	5,670	.078	5.94	14.8

[1] Rated capacity of prime movers plus that of electric motors driven by purchased energy.

The corresponding figures for the mills which produced their logs show that the output per establishment ranged from 10,082,000 feet for the 12 mills employing fewer than 100 wage earners each (actually averaging 68 wage earners each) to 84,518,000 feet for the 13 mills with 400 wage earners or more each (averaging 695 wage earners). Here, the output per man-hour and per wage earner both decreases with increase in size of mill, even though the rates on horsepower increase slightly; and the wages per thousand feet of lumber sawed increases with increase in size of mill, although the average wage per man-hour decreases slightly. The explanation of the relatively lower efficiency or productivity of the large mills in this group probably lies in the logging operations. The larger the mill, the farther back into the mountains and inaccessible places have the logging operations been carried, so that more labor (i. e., more wage earners and more man-hours) is required to produce a given quantity of logs than is necessary for a small mill. The horsepower figures apply only to the equipment in the mills and not to that used in logging. Hence, although the large mills themselves may be adequately powered, the advantage gained thereby was apparently offset by the relatively large added number of wage earners necessary to carry on their logging operations.

Quantity of product.—The second sections of the table classify the two groups of establishments according to quantity of lumber sawed, the smallest class in each case covering the mills which sawed less than 20,000,000 feet each during the year and the largest class those which sawed 50,000,000 feet or more. The results portrayed by these two sets of tabulations are about the same as those shown in the sections on number of wage earners employed. The most outstanding differences are shown for the mills which bought their logs. The rates on horsepower show little or no tendency to decrease with increase in size of plant on the basis of output, and this is accompanied with a slight increase in productivity; in the classification based on number of wage earners, both the horsepower rates and the productivity rates decreased appreciably with increase in size of mill. Additional consideration to the relationship of productivity to horsepower and horsepower per wage earner will be given later.

The tremendous amount of labor consumed in logging operations is well revealed by a comparison of these sections in which the mills are classified according to output. For the mills which bought their logs, the largest group, producing 50,000,000 feet or more, turned out an average output of 86,022,000 feet with 288 wage earners, while for the mills which produced their logs 682 wage earners were employed to produce an average of only 85,178,000 feet. The productivity per wage earner of the former, 299,000 feet, was 2.4 times that of the latter, 125,000 feet. In other words, relatively 58 per cent of the effort of the second group, on the basis of number of wage earners, and 61 per cent on the basis of man-hours, was spent in logging operations.

Output per man-hour.—The third sections of the table, in which the establishments are classified according to the output per man-hour, show that the wage cost per thousand feet sawed decreased greatly with increase in output per man-hour. Furthermore, this occurred even though the average wage cost per hour increased appreciably with increase in productivity. For the 47 mills which bought their

logs, the wage cost per thousand feet ranged from $6.38 for the 9 mills producing less than 100 feet per man-hour to only $3.91 for those 14 mills producing 150 feet and over per man-hour; and the accompanying wage cost per man-hour ranged from 54.5 cents to 67.2 cents.

This is especially significant when considered in connection with the average number of wage earners per plant. It becomes evident that efficiency, as measured by output per man-hour, is not entirely a matter of size of mill; the nine least efficient mills averaged 155 wage earners each, and the 14 most efficient ones averaged only 142 wage earners each; and yet, with 8 per cent fewer wage earners in the latter group, its productivity (172 feet per man-hour) was twice that of the former (85 feet per man-hour).

This is confirmed by the figures for the mills which produced their logs. Those figures, however, are characterized by still larger variation than was exhibited by the mills which purchased their logs.

Wages per man-hour.—The figures obtained when the establishments are classified according to the average wage cost per man-hour show that although there is considerable range in the average hourly wage rate and in the productivity, the relative increases in the two are almost identical; that for wages is slightly in excess of that for productivity. Among the mills which purchased their logs, the productivity for those paying 60 cents and over per man-hour (146 feet per man-hour) was 40 per cent in excess of that for those paying less than 50 cents per man-hour (104 feet per man-hour); and the corresponding increase in average wage cost was 46 per cent, i. e., from 45.7 to 66.7 cents. In other words, the increase in productivity apparently was 6 per cent less than that in wage cost. The horsepower per thousand feet of lumber sawed was about constant.

Substantially the same situation is found among the mills which produced their logs. The increase in productivity in this case, however, is 8 per cent less than the increase in hourly wage cost.

Horsepower.—The fifth and sixth sections of the table classify the establishments according to aggregate horsepower rating and horsepower per wage earner employed, respectively. The data for the classification based on average horsepower per establishment are very similar to those for the classification based on output. The mills with the smallest horsepower had the smallest average output, and the mills with the largest horsepower the largest average output. The productivity, however, measured either per man-hour or per wage earner, remained about constant, being about the same for the mills with several thousand horsepower as for the mills with less than one thousand horsepower. This was the case whether the mills bought their logs or produced them.

The situation is quite different, however, when the mills are classified on the basis of horsepower per wage earner. The mills with the largest horsepower per wage earner showed considerably more productivity than those with least horsepower per wage earner, especially in the case of those mills which produced their logs. For those which purchased their logs, the output per man-hour was 124 feet for those with less than 10 horsepower per wage earner, whereas it was 146 feet for those with 20 or more horsepower per wage earner. This is accompanied, however, with a very large range in the figures for horsepower per thousand feet sawed, running from 0.027 to 0.077

horsepower. The power per wage earner ranged from 7.6 to 25.8 horsepower.

The range in productivity in relation to horsepower per wage earner, in the mills which produced their logs, was even greater. In this group, the mills with less than 5 horsepower per wage earner showed an output of 42 feet per man-hour whereas those with 10 or more horsepower per wage earner produced 76 feet per man-hour, i. e., 80 per cent more. The accompanying range in horsepower per wage earner was from 3.6 to 14.8.

For both groups of mills the average wage cost per man-hour shows little relation to the available horsepower per wage earner, but does increase slightly (about 7 per cent) with increase in horsepower per wage earner; on the other hand, the wage cost per thousand feet of lumber sawed is considerably less for those mills with much horsepower per wage earner than for those with little horsepower per wage earner. This is especially the case for those mills which produced their logs. For these, the wage cost per thousand feet was $13.40 for those mills with less than 5 horsepower per wage earner, and only $8.01 for those with 10 or more horsepower per wage earner, a reduction of 40 per cent.

The mills with the greatest horsepower per wage earner are not the largest as measured by the number of wage earners employed. Indeed, for the mills which bought their logs, those with the largest number of wage earners seem to predominate in the groups with least horsepower per wage earner.

INDUSTRIAL AND LABOR CONDITIONS

Industrial Relations in the Electrical Industry

AN ACCOUNT of a cooperative plan for adjusting industrial relations, set up in 1920 by representatives of the National Association of Electrical Contractors and Dealers and the International Brotherhood of Electrical Workers is given in a recent study by the director of research of the latter organization.[1]

The plan centers in the National Council on Industrial Relations for the Electrical Construction Industry, which is the formal designation of the machinery set up. Two years of preparation preceded the establishment of this council. The immediate point of attack was the lessening of strikes.

In 1919, when conversations between employers and union leaders were going forward about a plan for the industry, there were 3,630 strikes in the United States, involving 4,160,348 men. The next year, in 1920, there were 3,411 strikes, involving 1,463,054 men; in 1921, 2,385 strikes, involving 1,099,248 men.

The leaders in the electrical construction industry knew the strike habit first hand. Yearly about the first of May agreements expired. Negotiation, begun three months before, usually resulted in an impasse, and regularly as May Day rolled around, the men dropped their tools and walked out or the employers locked their office doors. It was no unusual thing for the union to be operating 200 local strikes at one time.

Now one of the fallacies of popular thought is that labor unionists enjoy strikes. This is far from the truth. Strikes bring much inconvenience, much suffering,—and often real misery to women and children. Strikes are paradoxical weapons that usually leave the disputants exactly where they began, except for exhaustion, worn nerves, and festering bitterness. Negotiations follow. Some kind of understanding is reached. Disputes settled by strike or lockout make future peaceful settlements more difficult. Belligerent emotions whipped up must have some destination, just as habits of cooperation tend to strengthen with use. The strike is an expensive device, more costly to unionists than to employers and more costly to an industry than to either of the disputants.

There is no formal record of the meetings between representatives of the employers and the union during the first two years of negotiation, and no evidence that there was any effort to build a rigid, hard-and-fast plan to erect a highly mechanized structure. The eventual plan was grounded in good will between the leaders on both sides.

There were self-searchings and investigations. There is every reason to believe that all former arbitration boards—their methodology, their decisions, their failures—were closely scanned. It was concluded that arbitration as between labor and capital had failed in the past because any and every tribunal set up failed to inspire complete confidence. It was concluded that this confidence was lacking primarily because labor had come to feel that justice was stacked against it, in the beginning, even though so-called representatives of a third party, the public, were allowed to participate. The break with tradition, therefore, was complete and sharp. It was concluded that (1) labor should sit on the board; (2) labor should have equal representation with contractors; (3) the so-called disinterested party (who can never really be disinterested) should be excluded; (4) that all decisions should be unanimous.

[1] Hedges, M. H.: A strikeless industry—a cooperative plan for adjusting industrial relations. New York, The John Day Co. (Pamphlet No. 9), 1932.

When it was decided that labor was to be equally represented, and that decisions to be binding were to be unanimous, there was little difficulty in getting the necessary resolutions adopted by the conventions of the respective organizations in 1919. A committee of five from each convention was appointed. This joint committee met first on January 26, 1920, for the organization of the plan.

The joint committee proceeded upon the assumption that strikes were caused by a condition. No orderly course had been set up for the settling of disputes. These "idealists" believed that a proper course thus charted would lessen strikes. They even dreamed of a strikeless industry.

The code of policies formulated by the National Council for Industrial Relations shortly after its establishment is as follows:

1. The council views with disfavor sudden changes in wages, as unfair to employers on account of contract commitments. The council likewise, and for the same reason, discourages retroactive wage advances, unless requested by both disputants. The council reserves the right, however, to render decisions making sudden changes, or retroactive changes, or both, if in special cases the facts appear to warrant such action.
2. Industrial enterprise as a source of livelihood for both employer and employee should be so conducted that due consideration is given to the situation of all persons dependent upon it.
3. The public interest, the welfare and prosperity of the employer and employee, require adjustment of industrial relations by peaceful methods.
4. Regularity and continuity of employment should be sought to the fullest extent possible and should constitute a responsibility resting alike upon employers, wage earners, and the public.
5. The right of workers to organize is as clearly recognized as that of any other element or part of the community.
6. Industrial harmony and prosperity will be most effectually promoted by adequate representation of the parties in interest. Existing forms of representation should be carefully studied and availed of in so far as they may be found to have merit and are adaptable to the peculiar conditions of the electrical industry.
7. Whenever agreements are made with respect to industrial relations they should be faithfully observed.
8. Such agreements should contain provisions for prompt and final interpretation in the event of controversy regarding meaning or application.
9. Wages should be adjusted with due regard to purchasing power of the wage and to the right of every man to an opportunity to earn a living, and accumulate a competence; to reasonable hours of work and working conditions; to a decent home, and to the enjoyment of proper social conditions, in order to improve the general standard of citizenship.
10. Efficient production in conjunction with adequate wages is essential to successful industry. Arbitrary restriction of output below reasonable standards is harmful to the interest of wage earners, employers, and the public and should not be permitted. Industry, efficiency, and initiative whenever found should be encouraged and adequately rewarded, while indolence and indifference should be condemned.
11. Continuing agreements are recommended, providing they contain provision for settling disputes and for composing differences arising from controversial subjects, by reference to disinterested and competent judges.

Only 33 major decisions were rendered by the council in the first 10 years of its existence. A review of these 33 decisions reveals the council's struggles to set up new standards of procedure.

The first case to be submitted to the council was in 1921. A dispute arose in Detroit, between a large local of the union and the employers, over the demand of the employers for a wage cut of 25 cents an hour. The council refused to cut the wages of the Detroit workers. It said:

A fair wage, in the opinion of the council, is one which upon assumption based on statistics as to the duration of employment will satisfy as nearly as possible all the workers' needs. The adequacy of the wage to satisfy all of the workers'

needs is regulated by the cost of living and will vary with the fluctuating purchasing power of the dollar. Embodied in that statement is the principle upon which the council has reached its decision on the Detroit dispute.

In one early decision the council summarized the major causes of disputes as between the workers and the employers:

Intermittent and shifting employment, which brings discontent on the part of the wage earner.

The system of price competition, which drives both employers and employees to exploit the job to their mutual detriment, and

The lack of any general and moving understanding of the indissoluble partnership which exists in industry between management and labor.

The idea of partnership between management and men is developed in a later decision of the council.

The council is impressed with the fact that much education is still necessary for those in the building industry, if they are to appreciate the essential truth that every one of the crafts of which the industry is composed consists of workers, directive and manual. Directive workers may not insist on rules and regulations to the detriment of the manual workers without detriment to the craft; nor may the manual workers insist on conditions and wages to the detriment of the directive workers without detriment to the craft. These facts are as fundamental as the law of gravitation and if they are passed by without due recognition their force is not thereby diminished. Cooperation is the law of the industry and when that law is violated the industry, the craft, pays the penalty.

The council, at another time, "is of the opinion that it would be an economic fallacy to fix wages at the lowest notch in any particular locality, because the lowest-paid trade in the building industry has uniformly tended toward stagnation in growth, due to the unattractiveness of the monetary return as compared with other callings."

In these decisions the council was conservative about instituting wage cuts and about hampering production in the matter of working rules.

It was inevitable that cooperative methods of settling disputes would overflow into other channels. The rapid adoption of the 5-day week in the electrical construction industry in principal industrial centers during the years 1928–1929, in many instances at no cut in wages, can be traced to the habit of conference. Hitherto curtailment of hours has been won at the price of recurring strikes or at the cost of prolonged economic pressure. During the depression, rotation of work—to relieve unemployment—has been instituted in many cities without friction. Wage cuts have been greatly retarded.

The most notable instance of the widening influence of cooperative relations appears in the setting up of group insurance benefits, on an industrial basis, in several cities. The group life plan provides $3,000 life insurance, $40 a month pension on reaching the age of 65, and disability benefits. The policy is adapted to the needs of the precarious building industry. It does not lapse because of unemployment; it does not collect from retired members; it does not lapse in case of labor disputes; and it does not lapse because workers change employers, or places of operation. It is maintained by allocating a portion of each hourly wage of every man who works, to an insurance reserve.

The Electrical Guild of North America, founded by a competent group of electrical contractors, May 2, 1930, represents a further advancement of cooperative relations in the electrical construction industry. In one of his recent addresses, L. K. Comstock, president of the Electrical Guild, said:

We have amalgamated the ideas of the radical and the conservative, a process which accords with the law of growth. * * *

The cooperative plan has been set up in an industry, the problems of which are usually complex; which feels strongly the veering winds of an unstable economic world; which has hitherto been only slightly permeated by the rational spirit.

The cooperative plan insures democracy by dealing with the voluntary society of the workers; it guards management by making it the central source of power in the industry; it establishes industrial government without the aid of the State; it secures stability without fixity; it elevates craftsmanship and technology to places of prominence. It has features not dissimilar to those of the once-projected guild socialism, with the added virtue of being a going concern.

Employees' Suggestion Systems [1]

A REPORT containing an analysis of employees' suggestion systems, based on the plans of more than one hundred companies, has recently been issued by the Metropolitan Life Insurance Co. These plans, the report states, in utilizing the practical experience and specialized knowledge of individual employees serve primarily as a direct source of ideas which will be of benefit to the firm but they also have the less obvious effect of stimulating the interest of employees in the work of the company and of improving the general morale. Also, through encouraging employees to think, an excellent groundwork is laid for training and some firms which follow the policy of filling higher positions from the general force use suggestion systems as a guide to eligibility for advancement.

There are three types of suggestion systems—continuous, contest, and a combination of the two. In the first type, suggestions may be made at any time, while in the contest type the submission of suggestions is limited to a specified period. Continuous plans are found more frequently but some companies believe that restricting the period during which ideas may be presented results in an improvement in the quality and quantity of suggestions. Under the contest type of plan the attention of the employees is concentrated upon the contest, while it is thought that after a continuous plan has been in operation some time the interest of the employees in the plan gradually declines.

One of the earliest formal suggestion plans was that of the Yale & Towne Manufacturing Co., Stamford, Conn., which provided for a system of payments for valuable inventions which the company reserved the right to purchase; this plan is no longer in existence. The oldest system now in operation is believed to be that of the National Cash Register Co., which was established in 1894, while that of the Eastman Kodak Co., which was started about the same time, has also been in operation throughout the entire period. The present study, covering the plans of 108 companies, shows that prior to 1912 the idea gained little headway and that the greatest growth in the number of plans has been since 1919. Before 1912 only 7 of these concerns had suggestion systems, 34 were established between that year and 1919, and 67 from 1920 to 1928.

In order to avoid the submission of a large number of impractical ideas, employers frequently find it desirable both to define what is considered a suggestion and to specify the subjects regarding which

[1] Metropolitan Life Insurance Co. Policyholders Service Bureau. Employees' suggestion systems. New York, 1932.

ideas are desired. One company states that, "the basis of a suggestion should be a new idea or a new application of an old idea." Similar statements appear in a number of suggestion handbooks and many companies print lists of topics on which ideas are desired and for which awards will be made. The list suggested by the General Electric Co. includes suggestions for reducing production costs; increasing production; improving manufacturing methods, the quality or design of the product, and equipment and tools; preventing accidents or injury to health; improving working conditions; and preventing waste of material, labor, power, and floor space. Some companies also list the subjects, such as, for example, ordinary maintenance repairs, for which no award will be made. The B. F. Goodrich Co., Akron, Ohio, in addition to the regular suggestion program encourages employees who desire to cooperate, but lack confidence and initiative, through a plan of "assigned problems." "Under the plan, when a foreman is confronted with a problem to which he has no immediate answer, he first discusses it with the process engineer to make sure that some one is not working on a similar problem. If no effort is being made to solve the problem, he may select a worker to aid him in his study of the situation. If a satisfactory answer is found, both the foreman and the workman receive awards."

It is necessary, in the establishment of a suggestion plan, to determine what employees shall be eligible to participate. In general the plans are restricted to employees below the rank of foreman or department head. However, one company is cited which encourages suggestions from foremen, assistant foremen, subforemen, and all supervisors and department heads but does not pay money awards to members of the time study, production engineering, and research and engineering departments since new ideas and better methods of production are expected of them in line with the proper discharge of their duties. Another company not only permits every employee to make suggestions and receive awards but also awards a prize to the foreman whose department makes the most valuable suggestion during a campaign.

Suggestions which are found worthwhile are generally paid for in cash, but some companies make other awards such as certificates, photographs, jewelry, and banners, and sometimes both cash and prizes are given. The amounts of the cash awards usually vary according to the value of the suggestion, frequently being fixed at a percentage of the estimated savings for the first year, with a fixed maximum, and where the saving is intangible the rewards may be made according to the grade of the suggestion. If the system is conducted on a contest basis there is often a scale of awards graduated according to the value of the suggestion. In some cases supplementary awards are given to employees who have had a number of suggestions accepted.

The suggestion plans are nearly always administered by committees appointed by the management but occasionally the plan is placed in the hands of the employee representation organization and in some instances the suggestion system is organized as a function of one of the major operating departments.

Since delay in distributing awards has a tendency to create a feeling among the workers that the management is not interested in the workers' ideas, most plans endeavor to reduce the length of time

between the submission of an idea and the payment of the reward to a minimum, although in some instances the granting of the awards is made a special feature of some formal function during the year.

It has been found that the percentage of acceptable suggestions ranges from 20 to 50 per cent. The General Electric Co. in 1931 is reported to have awarded $55,739 to employees for suggestions for improving their jobs. A total of 19,595 suggestions was received and 6,383 were adopted.

The motive behind the suggestion systems of most companies is said to be the hope of obtaining profitable ideas, and unless such plans can be expected to result in definite savings few executives will favor them. However, it has been found that the intangible benefits are often of major importance and suggestions relative to public relations policies, for example, may be of very definite value to the company.

Report of English Committee on Road and Rail Transport [1]

THE relations between the railroad services and the agencies conveying goods by motor in England have caused considerable difficulty, and last April a committee of four representatives of each interest, under the chairmanship of Sir Arthur Salter, was appointed to consider the whole situation.

The terms of reference were to consider what would be a fair basis of competition and division of function between rail and road transport of goods; to consider the facts relating to the incidence of highway costs in relation to the contributions of the different classes of mechanically propelled vehicles; to consider the nature and extent of the regulation which, in view of modern economic developments, should be applied to goods transport by road and rail, and to make such recommendations as they are able to frame designed to assist the two sides of the industry to carry out their functions under equitable conditions.

The committee has recently presented a unanimous report in which three points are stressed: (1) That the users of mechanically propelled vehicles may fairly be called upon to meet the cost of keeping up the highways; (2) that this cost should be more fairly apportioned than at present between different classes of vehicles; and (3) that public control should be exercised over the hours and working conditions of those employed in road transport.

Distribution of Cost of Keeping up the Roads

THE committee point out that the advent of the internal-combustion engine has completely changed the character and extent of the use of the roads, and that the annual cost of constructing and maintaining them has risen from about £12,000,000 at the beginning of the century to about £60,000,000 at the present time.

The committee point out that commercial road transport, by itself, is far from paying the total cost, and that it would be unjust for them to be treated as if the roads had been built specifically for such purpose and for its specific use. On the other hand it is felt that private car owners may be paying more than their fair proportion of the £60,000,000, and that any such proportion should not be utilized to subsidize commercial transport. The railways are paying £64,000,000 per annum by way of interest on capital, maintenance and renewal, signalmen's wages, and local rates [taxes] for what to them is the equivalent of the roads to commercial transport, and this constitutes the prime difference between road and rail industries.

[1] Data are from Railway Review (London), Aug. 19, 1932; and Manchester (England) Guardian, Aug. 17, 1932.

At present, road users are subject to a tax on gasoline of 3d. per gallon and must pay fees for licenses. Both these methods of raising funds, as at present practiced, result in unfair distribution of the cost of the roads.

More than half the contributions made by the owners of motor vehicles is now in the form of a 3d. per gallon petrol duty. Steam, electric, and fuel-oil vehicles entirely escape this duty. The report also points out that under the present scale of duties a 10-ton vehicle pays no more in license duty than a 5-ton vehicle. This gives a preferential advantage to just that type of vehicle which the evidence showed to involve disproportionately high road expenditure.

After considering the question from various angles, the committee concluded that it would be fair to require the commercial vehicles to pay £23,500,000 of the £60,000,000 to be raised, while the balance, amounting to £36,500,000, should be paid by other mechanically propelled vehicles. This would mean an increase of £2,500,000 in receipts from commercial vehicles, and the committee recommends that this should be secured by increasing the license fees for such vehicles, especially for those which do not use gasoline and therefore escape contributions through the gasoline tax. For vehicles weighing, unloaded, not over 3 tons, no change is proposed, but the committee recommends that for those above that weight there should be drastic increases, varying with weight, use of solid or pneumatic tires, and source of motive power.

Hours and Working Conditions

Hours and working conditions for railway employees are sharply defined, and are defended by custom, by law, and by strong organizations among the workers. In road transport these defenses have not yet been built up, and the large number of competing units, together with the lack of any strong organization among the workers, has permitted the development of abuses on the part of some employers. The committee holds that it is to the interest of the public that the employees in road transport should have reasonable hours, wages, and working conditions, just as it is that the vehicles used should be maintained in good condition, and feels that the license system may well be utilized to secure these ends.

We agree without hesitation that all such vehicles should be required to have licenses which are conditional, not only upon the payment of the appropriate contribution toward the annual road costs, but also upon the observance of proper conditions as to fair wages and conditions of service, and the maintenance of the vehicles in a state of fitness.

It is also suggested that a continuing committee might be appointed to deal with these matters, developing them as conditions may require.

Cooperation Between Roads and Railways

On this point the committee is rather vague, not going beyond an indorsement of cooperation: "We believe that the best division of function will be obtained mainly through the deliberate effort of those engaged in road and rail transport to coordinate their services and give the public the full advantage of complementary service."

WOMEN IN INDUSTRY

Regulation of Employment of Women in Brazil[1]

A BRAZILIAN decree (No. 21417) of May 17, 1932, lays down specific regulations regarding the work of women in industrial and commercial establishments.

As regards the wages of workers, the decree states that no distinction shall be made as to sex.

The employment of women in public or privately owned industrial and commercial establishments between 10 p. m. and 5 a. m. is prohibited. Exceptions are made, however, in the following cases: Women employed in establishments where only members of the same family work; those whose work is necessary to prevent interruption of the normal operation of the establishment in case of emergencies, or to prevent the loss of raw materials or perishable substances; those employed in hospitals, clinics, sanatoriums, and insane asylums and directly responsible for the care of patients; those over 18 years of age employed by telephone and radio companies; and those holding responsible administrative positions.

Women shall not be required to handle articles above a given weight nor be employed in work carried on underground, in subterranean mining operations, quarries, private or public construction work, or in dangerous or unhealthful tasks.

Pregnancy alone shall not constitute a justifiable cause for the dismissal of a woman from her position. Expectant mothers shall not be required to work during the four weeks preceding and following childbirth. In unusual circumstances these periods may each be increased to six weeks, upon the recommendation of a physician. Women shall be entitled to receive half pay during the four to six weeks preceding and following childbirth, computed on the basis of their average wages during the previous six months. The compensation paid the woman workers during the period in which they are unable to work is to be taken from the funds established by the Institute of Social Insurance, unless money is not available from this source, in which case the employer must pay it.

When 30 or more women over 16 years of age are employed in an establishment it shall provide a day nursery for the employees' children. Woman employees shall be allowed two rest periods a day, of a half hour each, to nurse their children during the first six months following childbirth.

[1] Data are from Brazil, Diario Oficial, Rio de Janeiro, May 19, 1932.

HEALTH AND INDUSTRIAL HYGIENE

Industrial Diseases and Poisoning in British Factories, 1931

THE report of the chief inspector of factories and workshops in Great Britain for the year 1931 contains the report of Dr. John C. Bridge, senior medical inspector of factories, showing the causes and extent of industrial diseases and poisoning among workers in British factories.

Special investigations of health hazards made during the year included a study of the conditions of work and extent of exposure to asbestos dust of packers in the asbestos industry, an inquiry into the health of workers in contact with cellulose solutions and the effect on health of the constituents of such paints and lacquers, and an investigation of the effects of the work in coke ovens and by-products plants upon the general health of the workers.

Table 1 shows the number of cases of disease resulting from the use of some of the more important industrial poisons for certain years from 1900 to 1931.

TABLE 1.—NUMBER OF CASES OF POISONING AND OF INDUSTRIAL DISEASES AMONG FACTORY WORKERS IN GREAT BRITAIN FOR SPECIFIED YEARS, 1900 TO 1931

Disease	1900	1910	1920	1928	1929	1930	1931
Lead poisoning:							
Cases	1,058	505	289	326	244	265	168
Deaths	38	38	44	43	31	32	21
Mercury poisoning:							
Cases	9	10	5	4	------	3	6
Deaths	------	1	------	------	------	------	------
Arsenic poisoning:							
Cases	22	7	3	2	------	1	------
Deaths	3	------	------	1	------	------	------
Carbon bisulphide poisoning, cases	------	------	------	1	6	------	5
Aniline poisoning, cases	------	------	------	41	26	24	30
Chronic benzene poisoning:							
Cases	------	------	------	------	1	------	1
Deaths	------	------	------	------	------	------	1
Toxic jaundice:							
Cases	------	------	6	6	2	------	7
Deaths	------	------	3	------	1	------	2
Epitheliomatous ulceration:							
Cases	------	------	45	175	165	194	156
Deaths	------	------	1	59	50	36	46
Chrome ulceration, cases	------	------	126	70	109	95	65
Anthrax:							
Cases	37	51	48	45	40	43	21
Deaths	7	9	11	8	5	6	4

Lead poisoning.—There was a very decided decrease in the number of cases of lead poisoning and in the number of deaths, 168 cases with 21 deaths having been reported in 1931 as compared with 265 cases and 32 deaths the previous year. The decreased number of cases is in part explained by the smaller number exposed to risk, but it is also considered that there is better protection from the risk attendant upon the use of lead. The report points out the possibility of confusion between lead poisoning and certain types of acute appendicitis, as three cases of lead poisoning which had been operated on were

reported during the year. The possibility of such confusion is likely to arise in a first attack when there is no inquiry as to a man's occupation and especially when the lead risk is, as it were, "concealed" in that the occupation is not a common source of lead poisoning or when the man is not aware that he is exposed to lead at all. The largest number of cases of lead poisoning, 64 with 6 deaths, occurred in the painting of buildings, followed by 21 cases and 1 death in electric accumulator works; 15 cases and 1 death in smelting of metals; and 10 cases and 1 death in paint and color manufacture, the remainder occurring in a variety of industries. The proportion of deaths in the pottery industry is high, as 7 of the 9 cases reported resulted in death. However, part of these cases at least were not first reported during the year. Vitreous enameling was responsible for 7 cases and 1 death, in the fatal case the man having been employed as an enameler for 33 years.

Chronic benzene poisoning.—The one case of chronic benzene poisoning reported occurred in a man who had worked with benzol for 38 years—30 years at a benzol distillation plant and 8 years in superintending the packing of benzol with only very slight exposure. The case is considered of special interest as the onset of ill health was sudden. Following the extraction of several teeth the patient grew rapidly worse, dying in a few months from the beginning of the illness. If there had been no history of exposure to benzol the case would probably have been diagnosed as agranulocytic angina—a rare disease in which there is acute inflammation in the mouth, together with a progressive anemia. In the case reported there was a septic ulcerative condition in the mouth and the red blood cells were reduced to about one-quarter the normal number while the number of white cells was even more reduced.

Toxic jaundice.—The seven cases of toxic jaundice with two fatalities were due to arseniuretted hydrogen. Six cases, including the two fatalities, arose in the damping down of residue containing a metallic arsenide to eliminate the dust during moving. Although toxic doses were inhaled on specific occasions, it was shown that slight amounts of arsenic had been inhaled from time to time as in one of the fatal cases there were traces of arsenic in the bones.

Anthrax.—The number of cases of anthrax was much smaller than in the preceding year, numbering 21 with 4 deaths as compared with 43 cases and 6 deaths in 1930. Nine cases occurred in the wool industry, 7 in hides and skins, 4 in the horsehair industry, and 1 in a slaughterhouse worker.

Epitheliomatous ulceration.—There were 76 cases of epithelioma with 15 deaths due to work in pitch and tar, including patent fuel works, tar distilling, gas works, and other industries. Two cases were due to paraffin in shale oil works, and 78 with 31 deaths were caused by mineral oil, chiefly in cotton mule spinning. The addition of 60 new cases among cotton mule spinners brings the total number of recorded cases among these workers to 1,062, of which 867 were in spinners who were still employed when the disease was recognized, 52 occurred in spinners who had retired before recognition of the disease, for periods varying from 1 to 16 years, and 143 were in ex-spinners who had taken up other employment which might in some cases have contributed to the causation of the disease. Eight

cases of carcinoma of the bladder were reported, five of which occurred in chemical workers employed for periods varying from 14 to 23 years in the manufacture of synthetic dyes.

Dermatitis.—Reporting of cases of skin disease is not compulsory, but up to 1930 the number of cases reported had steadily increased. The decrease reported first in that year was maintained in 1931, the number of cases voluntarily reported falling from 789 to 666. While the decrease in the volume of trade accounts for part of this decrease it is evident from the reports that the incidence of some of the more readily controlled causes of dermatitis has been reduced.

Silicosis and asbestosis.—There were 785 deaths reported from fibrosis of the lungs, of which 319 were due to silicosis. In all cases, even those in which the employment on the certificate showed no known exposure to silica dust, it was found by following up the history of employment that there had been previous exposure to dust containing silica.

There were 9 deaths reported during the year from asbestosis or asbestosis with tuberculosis. In the comparatively short period since the disease has been recognized there have been 35 deaths reported from this cause for which full particulars are available. The average age at death in the cases of asbestosis with tuberculosis was 45.7 years and the average length of employment in asbestos 13.5 years, while in the cases without tuberculosis the average age at death was 40.6 years and the average length of employment in asbestos 15.1 years.

Poisoning from gases and fumes.—The number of cases of poisoning from carbon monoxide was 63 with 8 deaths, which was much smaller than the preceding year. Of these cases, 8 with 2 deaths were caused by blast-furnace gas; 28 with 2 deaths by power-furnace gas; 18 with 3 deaths by coal gas; and 9 cases with 1 death were due to various causes.

Table 2 shows the number of cases of poisoning from gases and fumes for the years 1927 to 1931:

TABLE 2.—NUMBER OF CASES OF INDUSTRIAL POISONING FROM GASES AND FUMES, 1927 TO 1931, BY YEARS

Gas or fume	1927	1928	1929	1930	1931	Gas or fume	1927	1928	1929	1930	1931
Carbon monoxide:						Nitrous fumes:					
Cases	88	81	113	94	63	Cases	7	6	11	5	9
Deaths	4	9	10	14	8	Deaths	----	1	2	----	----
Carbon dioxide:						Ammonia:					
Cases	3	8	----	2	5	Cases	5	12	18	2	4
Deaths	----	1	----	1	----	Deaths	----	1	----	----	----
Sulphuretted hydrogen:						Benzol, benzine, and petrol, naphtha:					
Cases	9	9	7	5	3	Cases	7	7	7	7	5
Deaths	----	3	2	----	----	Deaths	2	2	----	1	3
Sulphur dioxide:						Miscellaneous:					
Cases	5	10	6	4	6	Cases	23	17	36	9	14
Deaths	1	----	----	----	----	Deaths	2	2	1	1	----
Chlorine, cases	14	17	14	5	13						

INDUSTRIAL ACCIDENTS

Accident Statistics of the National Safety Council for 1931

ACCIDENTS in the United States during 1931 were responsible for approximately 97,000 deaths and 9,403,000 nonfatal injuries, according to the 1932 edition of Accident Facts, the annual statistical publication of the National Safety Council. It is estimated that the wage loss, medical expense, and overhead insurance cost involved in these deaths and injuries amounted to $2,308,000,000.

The number of deaths is based on a 2.2 per cent reduction from the figures of the United States Bureau of the Census for 1930 (99,300), as such a reduction was indicated in a compilation of reports from 39 States and the District of Columbia. An estimated division of the deaths attributes 17,000 to industrial accidents, 33,500 to motor-vehicle accidents, 20,000 to other public accidents, and 29,000 to home accidents. It was further estimated that the figures for motor vehicles included 2,500 deaths to persons gainfully employed, which consequently are also classed as industrial, so that they appear in both groups of the division, but the duplication is eliminated in the total.

Comparison with the 1930 figures shows reductions of 2,000 in industrial fatalities and 1,000 in home fatalities, but an increase of about 600 in motor-vehicle fatalities, while the deaths resulting from other public accidents remained stationary. The estimated duplication in motor-vehicle and industrial fatalities was reduced 500.

It is stated that the absence of adequate data prevents any accurate statement regarding the distribution of all accidental injuries during the year by extent of disability. A rough approximation of such a distribution, however, is made, based on data from the United States Bureau of the Census, State industrial commissions, insurance companies, and individual industrial establishments. This distribution, further divided for the four principal classes of accidents, is presented as Table 1.

TABLE 1.—APPROXIMATE DISTRIBUTION OF ACCIDENTAL INJURIES IN THE UNITED STATES IN 1931, BY TYPE OF ACCIDENT AND EXTENT OF DISABILITY

Type of accident	Extent of disability			Total
	Death	Permanent	Temporary	
Industrial	17,000	60,000	1,490,000	1,567,000
Motor vehicle	33,500	95,000	1,100,000	1,228,500
Other public	20,000	70,000	2,330,000	2,420,000
Home	29,000	130,000	4,220,000	4,379,000
Total [1]	97,000	348,000	9,055,000	9,500,000

[1] Items are adjusted to eliminate duplications in figures for industrial and motor-vehicle deaths and injuries.

The temporary injuries shown in the table include only those causing disability extending beyond the day of injury. According to these figures, there was an average of about 4 permanent disabilities and 93 temporary disabilities, or a total of 97 nonfatal injuries for each death, but this proportion varies somewhat for the different types of accidents. The ratio for industrial accidents was about 90 nonfatal injuries to 1 death, for motor-vehicle accidents 35 to 1, for other public accidents 120 to 1, and for home accidents 150 to 1.

The estimate of the number of deaths resulting from industrial accidents in 1931 is based on a survey covering industrial fatalities in 1928 and 1929,[1] taking into account the experience of the States of New York, Ohio, Pennsylvania, and Illinois, which shows a reduction slightly below 10 per cent from 1928 to 1931, together with the experience of the Metropolitan Life Insurance Co.'s industrial policyholders, which shows a reduction of a little more than 10 per cent for the same period.

Rough approximations are given of the wage loss, medical expense, and overhead cost of insurance involved in the four principal types of accidents, as shown in Table 2.

TABLE 2.—APPROXIMATE DISTRIBUTION OF SPECIFIED COSTS OF ACCIDENTAL INJURIES IN THE UNITED STATES IN 1931, BY TYPE OF ACCIDENT

Type of accident	Wage loss	Medical expense	Overhead cost of insurance	Total
Industrial	$500,000,000	$39,000,000	$104,000,000	$643,000,000
Motor vehicle	569,000,000	72,000,000	62,000,000	703,000,000
Other public	405,000,000	94,000,000	13,000,000	512,000,000
Home	408,000,000	128,000,000	9,000,000	545,000,000
Total [1]	1,808,000,000	327,000,000	173,000,000	2,308,000,000

[1] Items are adjusted to eliminate duplications in figures for industrial and motor-vehicle deaths and injuries.

It is emphasized that the figures in Table 2 do not include estimates for accidents not resulting in personal injury, nor any costs incidental to personal-injury accidents other than the three items specified. The figures for wage loss include arbitrary charges for deaths and permanent disabilities, and the estimated wage loss of $500,000,000 for industrial accidents should not be confused with compensation costs, as the deaths and permanent injuries are figured at their full economic values, which exceed compensation payments.

Comparison with the latest official figures on accidental death rates in foreign countries discloses that the United States has the highest rate in the civilized world, with 80.6 accidental deaths per 100,000 population in 1930. This is more than three times the rate of Denmark (24.5 in 1929), nearly twice that of England and Wales (42.6 in 1930) or Germany (43.3 in 1929), and 50 per cent higher than France (54.0 in 1929). The rate for Canada, which is the highest for the foreign countries listed, is given as 63.0 in 1930. The provisional death rate for 1931 for the United States, based on the estimated number of deaths, is shown as 78.2.

The publication includes a summary of the experience among establishments reporting industrial injury rates directly to the National Safety Council. The summary shows that an average reduction of

[1] See Labor Review for March, 1931, p. 93.

38.4 per cent in frequency rates and 19.3 in severity rates has been accomplished during the past two years in the 2,307 industrial units reporting to the council in each of the three years, 1929, 1930, and 1931.

Table 3 presents the injury frequency and severity rates for these 2,307 identical industrial units for 1928, 1929, and 1930, by industry. The combined man-hour exposure during the three years was 3,996,565,000 in 1929; 3,413,131,000 in 1930; and 2,668,098,000 in 1931.

TABLE 3.—INJURY FREQUENCY AND SEVERITY RATES OF 2,307 INDUSTRIAL UNITS REPORTING IN EACH OF THREE YEARS, 1929, 1930, AND 1931, BY INDUSTRY

Industry	Number of units	Frequency rates (per 1,000,000 hours' exposure)			Severity rates (per 1,000 hours' exposure)		
		1929	1930	1931	1929	1930	1931
Automobile	37	27.41	15.98	15.14	1.30	1.59	1.17
Ceramic	31	26.63	22.20	22.75	1.10	1.68	4.68
Chemical	145	16.76	14.73	10.65	1.63	1.95	2.01
Construction	203	55.16	52.47	56.71	5.68	5.81	4.52
Electric railway	36	28.78	23.94	23.89	2.22	1.70	1.71
Food	121	18.97	15.07	14.42	1.43	1.11	1.18
Foundry	91	48.20	32.53	23.62	1.95	2.28	1.84
Glass products	13	12.03	12.82	11.49	.52	1.19	.43
Laundry	29	13.65	9.01	5.90	1.65	.67	1.81
Machinery	187	18.36	14.01	10.04	1.18	1.05	.93
Marine	7	16.09	16.20	15.33	2.11	2.46	4.33
Meat packing	14	56.98	41.25	35.22	1.48	.92	.89
Metal products	294	24.20	15.77	13.72	1.30	1.12	1.07
Mining	90	66.62	65.46	61.32	9.01	9.68	8.90
Nonferrous metallurgical	28	25.53	17.41	11.67	2.65	1.33	.96
Paper and pulp	140	25.33	21.28	18.22	1.68	1.55	1.49
Petroleum	42	25.85	17.33	13.03	2.40	2.27	1.98
Printing and publishing	19	12.92	11.29	11.93	.60	.49	.21
Public utility	233	21.72	16.55	11.30	3.25	2.81	2.09
Quarry	92	23.98	18.16	16.64	5.88	2.13	6.06
Railway car and equipment	22	29.15	19.65	17.89	1.90	2.78	1.40
Refrigeration	29	40.95	32.63	28.56	2.91	2.21	1.04
Rubber	25	23.75	15.75	16.59	1.37	1.19	1.59
Steel	100	16.46	11.48	10.11	2.77	2.52	2.19
Tanning and leather	31	30.86	24.62	22.14	1.62	1.68	.94
Textile	115	11.64	9.44	8.72	.56	.74	.60
Woodworking and lumbering	129	44.63	37.82	31.09	3.73	3.68	2.27
Total [1]	2,307	24.51	18.42	15.10	2.18	2.07	1.76

[1] Totals include miscellaneous industries and eliminate duplication between marine and petroleum industries. Data are not available for cement industry.

Most of the units whose reports are used in the compilations are members of the National Safety Council, but in some cases data from nonmembers are included, particularly where the reports are received through industrial organizations. The 1931 figures are based on reports from 4,383 industrial units, with 2,010,350 employees working 4,454,554,000 man-hours, as against 4,198 units, with 2,236,629 employees working 5,206,395,000 man-hours in 1930.[2]

A total of 15.12 disabling injuries was reported for each 1,000,000 man-hours worked in 1931, involving a time loss of 1.72 days per 1,000 man-hours worked, based on actual time lost for temporary disabilities and time-loss for permanent disabilities and death computed in accordance with the schedule charges of the International Association of Industrial Accident Boards and Commissions.

[2] For 1930 data, see Labor Review for October, 1931, p. 92.

As in 1930, the cement industry had the lowest frequency rate (4.86 in 1931), but construction, which had the highest frequency rate in 1930, was passed by mining (57.24 in 1931), previously the second highest. Printing and publishing held its place with the lowest severity rate (0.25 in 1931), while mining likewise continued with the highest severity rate (9.44 in 1931).

Table 4 shows, by industry, the total number of units reporting for 1931, the number of man-hours worked, and injury frequency and severity rates.

TABLE 4.—INJURY FREQUENCY AND SEVERITY RATES FOR ALL ESTABLISHMENTS REPORTING FOR 1931, BY INDUSTRY

Industry	Number of units	Man-hours worked (thousands)	Frequency rates (per 1,000,000 hours' exposure)	Severity rates (per 1,000 hours' exposure)
Automobile	75	277,383	9.48	0.94
Cement	111	48,122	4.86	2.80
Ceramic	51	16,167	22.89	3.21
Chemical	238	181,678	12.65	1.84
Construction	370	70,820	48.15	5.14
Electric railway	68	110,861	19.73	1.46
Food	213	149,610	15.86	1.01
Foundry	140	62,665	24.19	2.10
Glass products	56	64,901	11.31	.54
Laundry	39	8,973	6.24	2.75
Machinery	300	392,230	9.57	.90
Marine	55	135,964	24.28	2.87
Meat packing	69	141,814	29.13	.99
Metal products	431	267,159	14.70	1.17
Mining	189	61,860	57.24	9.44
Nonferrous metallurgical	53	70,473	9.88	1.18
Paper and pulp	239	162,740	20.62	1.52
Petroleum	89	568,401	14.14	2.06
Printing and publishing	51	28,949	9.12	.25
Public utility	584	665,112	12.76	2.08
Quarry	151	13,534	22.98	6.88
Railway car and equipment	33	30,042	15.48	2.08
Refrigeration	68	28,560	32.18	2.00
Rubber	55	112,016	11.78	1.03
Steel	121	317,983	10.87	2.22
Tanning and leather	74	61,244	13.73	.56
Textile	205	214,259	9.11	.58
Woodworking and lumbering	211	67,058	33.54	2.60
Total [1]	4,383	4,454,554	15.12	1.72

[1] Totals include miscellaneous industries, not shown separately, and eliminate duplications between marine and petroleum industries.

Detailed data on motor-vehicle accidents, other public accidents, home accidents, steam-railway accidents, aviation accidents, and student accidents are included in the publication, as well as notes regarding 1932 accidents. The latter state that industrial fatalities reported to the industrial commissions in New York, Ohio, Pennsylvania, and Illinois for the first five months of 1932 showed a decline of nearly 21 per cent, as compared with the corresponding period of 1931. The decrease is attributed principally to the unemployment, with the statement: "A man out of work can not be killed in an industrial accident."

Metal-Mine Accidents in the United States in 1930

THE report of the United States Bureau of Mines on metal-mine accidents in the United States during the year 1930, published as its Bulletin 362, shows that the safety record established for the year was the best ever known in the industry.

The death rate from accidents in metal and nonmetallic-mineral mines (except coal mines) was 2.92 per thousand 300-day workers for 1930, a decrease of nearly 4 per cent from the 3.03 rate for 1929 and lower than for any previous year except 1928. The nonfatal lost-time injury rate for 1930 was 167.86 per thousand 300-day workers, a reduction of 16 per cent as compared with the rate of 200.11 for 1929 and lower than ever before.

The average number of workers employed was 103,233 and the average number of days worked per man was 270, making a total number of 92,900 full-year or 300-day workers, or 22,494 less than in 1929. The actual number of workers killed in 1930 was 271, or 79 less than in 1929, while the actual number of nonfatal injuries was 15,594, or 7,498 less than in 1929.

Accidents during the year resulted in 271 deaths, 22 permanent total disability cases, 481 permanent partial disability cases, and 15,091 temporary disability cases. The bureau estimates that aggregate loss of time represented by these 15,865 injuries was 2,338,983 days, an average of 147 days per injury.

Underground mining operations, which provided 62 per cent of the employment for the year, were responsible for 237 deaths, of which 37 occurred in shaft accidents, and 12,621 nonfatal injuries, of which 423 occurred in shaft accidents. The principal cause of both fatal and nonfatal injuries was falls of rock or ore from the roof or wall. Other prominent causes of deaths, in the order of their importance, were explosives, falls of persons, and haulage, while the other outstanding causes of nonfatal injuries were loading ore at the face, haulage, hand tools, and drilling. Open-cut mining, with 12 per cent of the employment, was responsible for 10 deaths and 842 nonfatal injuries, while surface work, with 26 per cent of the employment, was charged with 24 deaths and 2,131 nonfatal injuries.

The following table shows the number of workers employed, the number killed and injured, and fatal and nonfatal injury rates in the different groups of metal and nonmetallic-mineral mines (except coal mines) in 1930.[1]

EMPLOYMENT AND ACCIDENTS IN METAL MINES AND NONMETALLIC-MINERAL MINES (EXCEPT COAL), 1930

Type of mine	Average days active	Men employed		Men killed		Men injured	
		Actual number	Equivalent number of 300-day workers	Number	Per 1,000 300-day workers	Number	Per 1,000 300-day workers
Copper	298	27,692	27,501	76	2.76	5,321	193.48
Gold, silver, and miscellaneous metal	269	27,045	24,252	109	4.49	5,813	239.69
Iron	263	29,410	25,744	69	2.68	2,096	81.42
Lead and zinc (Mississippi Valley)	215	8,524	6,123	10	1.63	1,081	176.55
Nonmetallic mineral	264	10,562	9,280	7	.75	1,283	138.25
Total	270	103,233	92,900	271	2.92	15,594	167.86

[1] For 1928 and 1929 figures, see Labor Review for March, 1932.

Accidents at Metallurgical Works in the United States in 1930

A REPORT of accidents in the metallurgical industry in the United States during 1930, published by the United States Bureau of Mines,[1] shows a great reduction in accident frequency rates from the rates for 1929, except in the auxiliary works, where the death rate per thousand 300-day workers increased from 0.41 in 1929 to 0.91 in 1930.

Combined figures for ore-dressing plants, smelting plants exclusive of iron blast furnaces, and auxiliary works show that deaths decreased from 43 in 1929 to 25 in 1930, a reduction of 41.9 per cent, and nonfatal accidents decreased from 4,575 in 1929 to 2,726 in 1930, a reduction of 40.4 per cent. The total accidents decreased from 4,618 in 1929 to 2,751 in 1930, a reduction of 40.4 per cent. Employment, however, declined from 53,587 300-day workers in 1929 to 44,403 in 1930, a decrease of 17.1 per cent, so that the decreases from 1929 to 1930 in accident frequency rates for the total industry was 30 per cent for fatal injuries and 28.1 per cent for nonfatal injuries.

It is estimated that the 2,751 fatal and nonfatal injuries reported for 1930, represent a loss of time or period of disability equal to 318,610 man-days, or an average of 116 man-days per injury. Falls of persons and machinery were the principal causes of fatal injuries, while the nonfatal injuries were caused mainly by handling materials, falls of persons, flying or falling objects, hand tools, and machinery.

The following table shows the number of workers employed, the number killed and injured, and fatal and nonfatal accident rates in each of the three groups of plants for 1929 and 1930.

EMPLOYMENT AND ACCIDENTS AT METALLURGICAL PLANTS IN THE UNITED STATES, 1929 AND 1930 [1]

Group and year	Average days active	Men employed		Men killed		Men injured	
		Actual number	Equivalent number of 300-day workers	Number	Per 1,000 300-day workers	Number	Per 1,000 300-day workers
Ore-dressing plants:							
1929	312	13,721	14,266	17	1.19	1,460	102.34
1930	287	11,648	11,131	6	.54	881	79.15
Smelting plants:							
1929	358	18,603	22,222	19	.86	1,679	75.56
1930	350	17,168	20,035	7	.35	1,061	52.96
Auxiliary works:							
1929	340	15,075	17,099	7	.41	1,436	83.98
1930	332	11,971	13,237	12	.91	784	59.23

[1] For comparison of 1928 and 1929 data, see Labor Review for March, 1932.

Quarry Accidents in the United States in 1930

ACCIDENT reports received by the United States Bureau of Mines from operators of quarries, covering practically the entire industry, disclosed a better safety record in 1930 than in any previous

[1] United States. Department of Commerce. Bureau of Mines. Technical paper 530: Accidents at metallurgical works in the United States during the calendar year 1930, by William W. Adams. Washington, 1932.

year since complete records became available, according to the report of the Bureau of Mines, published as its Bulletin 366.[1]

During 1930 the number of accidental deaths per thousand workers was 7 per cent lower than in 1929 and lower than that of any other year except 1928, while the number of accidental nonfatal injuries was 16 per cent lower than in 1929 and lower than in any other year.

The total number of workers reported for 1930 was 80,633, or 6 per cent less than in 1929, but as the average number of working-days per man was 255, compared with 268 in 1929, the aggregate number of man-days was only 20,559,372 in 1930 as against 22,967,579 in 1929, a reduction of 10 per cent.

Accidents during the year resulted in 105 deaths, 12 cases of permanent total disability, 253 cases of permanent partial disability, and 7,152 cases of temporary disability. It is estimated that these 7,522 injuries represented a total loss of time equal to 975,920 man-days, making an average of 130 days per injury. Seventy-four of the deaths and 4,652 of the nonfatal injuries occurred to workers in or about the quarries.

Table 1 shows the number of men employed and the number killed and injured in the quarrying industry, 1911 to 1930 by 5-year periods, and 1926 to 1930 by years.

TABLE 1.—NUMBER OF MEN EMPLOYED, NUMBER KILLED AND INJURED, AND FATAL AND NONFATAL INJURY RATES IN QUARRIES, 1911 TO 1930

Period or year	Average days active	Men employed		Men killed		Men injured	
		Actual number	Equivalent number of 300-day workers	Number	Per 1,000 300-day workers	Number	Per 1,000 300-day workers
1911–1915 (average)	240	103,803	83,206	182	2.19	7,437	89.39
1916–1920 (average)	259	80,682	69,630	146	2.10	11,161	160.29
1921–1925 (average)	263	86,967	76,377	136	1.78	13,247	173.44
1926	271	91,146	82,361	154	1.87	13,201	160.28
1927	271	91,517	82,609	135	1.63	13,459	162.92
1928	273	89,667	81,325	119	1.46	10,568	129.95
1929	268	85,561	76,559	126	1.65	9,810	128.14
1930	255	80,633	68,531	105	1.53	7,417	108.23
1926–1930 (average)	268	87,705	78,277	128	1.64	10,891	139.13

The apparently low rate for nonfatal injuries in the period 1911 to 1915 is attributed to incomplete data for the years 1911 to 1913 concerning minor injuries.

Falls or slides of rock or overburden were the leading cause of fatal injuries, but ranked seventh as a cause of nonfatal injuries. Other principal causes of death were explosives, machinery, and falling objects. Nonfatal injuries were chiefly due to handling material, flying objects, machinery, falls of persons, and haulage.

Table 2 shows the percentage of fatalities and nonfatal injuries for 1930, by causes, segregated according to place of occurrence.

[1] United States. Department of Commerce. Bureau of Mines. Bulletin 366: Quarry accidents in the United States during the calendar year 1930, by William W. Adams. Washington, 1932.

TABLE 2.—PERCENTAGE DISTRIBUTION OF CAUSES OF FATAL AND NONFATAL INJURIES IN THE QUARRY INDUSTRY, 1930, WITH FREQUENCY RATES

Place of occurrence, and cause of injury	Number killed		Number injured	
	Per cent of total	Per thousand 300-day workers	Per cent of total	Per thousand 300-day workers
In and about quarries:				
Falls or slides of rock or overburden	22.86	0.35	5.65	6.11
Handling materials	4.76	.07	17.63	19.09
Timber or hand tools			1.77	1.91
Explosives	13.33	.20	1.77	1.91
Haulage	5.72	.09	5.46	5.91
Falls of persons	3.81	.05	4.06	4.39
Falling objects (other than first 2 items)	6.67	.10	2.91	3.15
Flying objects	2.86	.04	7.47	8.08
Electricity	.95	.02	.28	.31
Drilling and channeling (by machine or hand)	.95	.02	3.29	3.56
Machinery	7.62	.12	4.39	4.76
Nails, splinters, etc			1.28	1.39
Burns			.69	.74
Other causes	.95	.02	6.07	6.57
In outside works:				
Haulage	3.81	.05	2.60	2.82
Machinery	9.53	.14	4.85	5.25
Hand tools			2.01	2.17
Nails, splinters, etc			1.11	1.20
Electricity	2.86	.04	.42	.45
Falls of persons	4.76	.07	4.23	4.58
Falling objects (rocks, timbers, etc.)	4.76	.07	3.22	3.49
Flying objects	.95	.02	6.22	6.73
Handling materials	.95	.02	5.87	6.35
Burns	.95	.02	1.98	2.14
Other causes	.95	.02	4.77	5.17
Total	100.00	1.53	100.00	108.23

Age Factor in Industrial Accidents

THE July, 1932, issue of the Industrial Labor Bulletin, published by the Department of Labor and Industry of Maine, calls attention to a review of a paper on the age factor in the occurrence of industrial accidents, prepared by Dr. C. S. Slocombe, safety manager of the Boston Elevated Railway, which had been published in the American Mutual Magazine.[1]

The author states that while young workers have the most accidents, this is probably because the majority of workers are young, as well as because they are more inexperienced than the older workers and consequently more liable to accidents. He states, however, that injuries sustained by older workers are relatively more costly, as older persons lack the recuperative power of younger ones.

The article includes a series of charts, covering a wide exposure in several industries in various parts of the country. The experience of the Boston Elevated Railroad shows definitely that its workers between the ages of 36 and 40 have the largest number of injuries, but also that this age group contains a larger number of workers than any of the other groups. From the standpoint of accident frequency per 1,000 employees the largest number of injuries occurs in the age groups of 25 years and under, containing the new and inexperienced employees. Except for a slight rise for the age group 45–50 years, a steady decrease is experienced with the increase of age, up to 56 years, after which a small increase occurs.

[1] American Mutual Liability Insurance Co., American Mutual Magazine, August, 1930.

Experience compiled from data published by the Industrial Commission of Wisconsin shows a lessening trend for injuries causing temporary disability with increase in age, while injuries causing permanent disability remain on practically the same level throughout all age groups from 18 years to 65 years and over.

The experience of a steel plant, shown by figures published by the United States Bureau of Labor Statistics, shows that in this case the age group 20–29 years dominates all other groups for total number of injuries; the age group 30–39 years is also prominent, but it is also shown that the new and inexperienced employees have the heaviest record proportionately. Workers with six months' experience and less are charged with about 37 injuries per 1,000,000 hours of exposure. The rate is reduced but remains fairly high until after three years of service, when it drops sharply and continues downward so that workers with 10 to 15 years' experience are charged with only 2 injuries per 1,000,000 hours of exposure.

Data from both Wisconsin and New York show that it takes longer for older persons to recover from their injuries than the younger ones. This is supplemented by data showing a considerable increase in cost of compensation to older workers employed by the Boston Elevated Railway, but based upon the number of employees in each age group.

The author asserts that age and experience are important factors in industrial accidents, and that executives and safety men can do three things to control them: Concentrate more attention on new employees; reduce the labor turnover, to avoid constantly having unsafe, inexperienced workers; and installation of pension plans for workers over 65.

Principal Causes of Industrial Injuries in Ohio

IN THE June, 1932, issue of the Ohio Industrial Commission Monitor, the division of safety and hygiene of the industrial commission advocates concentration of accident-prevention efforts on a few causes which are responsible for the greatest proportion of industrial injuries.

It is pointed out that in 1931 six causes were accountable for a total of 125,058 claims, or 72.9 per cent of all injuries in the industries of Ohio. These six causes, listed according to respective frequency of injuries, were:

Handling of objects	30,742
Machinery	28,695
Stepping upon or striking against objects	19,399
Hand tools	18,312
Falls of persons	17,156
Motor vehicles	10,754

Safety committees, it is said, often deal in the abstract with the accident problem and neglect specific attention to well-recognized hazards, as seen through the fact that these six sources of injury remain the principal ones from year to year, with perhaps a slight variation in the relative importance.

While it is admitted that many of the injuries may be chargeable to inadequate mechanical safeguarding, it is declared that a large

majority involved the human element, especially in the handling of objects, stepping upon and striking against objects, and hand tools. Asserting that these three causes, which were responsible for 39.8 per cent of all industrial injuries in the State during 1931, should be controlled by ordinary safety methods and safe practices, it is stated that first of all poor housekeeping, faulty supervision, and carelessness must be eliminated.

Specialization on the eradication of these same sources is advised, with the comment that there is really nothing intricate or difficult about accident prevention, and that whenever the contributing causes are known accident-prevention work should be as simple as any of the routine processes of plant operation.

LABOR LAWS AND COURT DECISIONS

California Prevailing-Wage Law Declared Constitutional

THE California prevailing-wage law was declared constitutional and valid by the Supreme Court of California, in deciding the case of Metropolitan Water District *v.* Whitsett (10 Pac. (2d) 751). The court said "the great weight of authority and distinct trend of recent judicial decision is in favor of the constitutionality of prevailing-wage laws as applied to public work."

The case came before the court in an action to compel the chairman of the board of directors of the Metropolitan Water District to sign a contract for the construction of a road to be used in connection with the Colorado River aqueduct. The facts in the case showed that bids for the construction of the road were invited and the contract was duly awarded to Martin Bros. Trucking Co. Later the chairman of the board refused to sign the contract because the board did not "ascertain and specify in its notice inviting proposals, and insert in the contract, the general prevailing rate of per diem wages in the locality in which the work is to be performed" as required by the California prevailing-wage law (Acts of 1931, ch. 397.)[1] The law provides in part as follows:

> Not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the work is performed * * * shall be paid to all laborers, workmen, and mechanics employed by or on behalf of the State of California, * * *.
>
> The public body awarding any contract for public work * * * shall ascertain the general prevailing rate of per diem wages in the locality in which the work is to be performed, for each craft or type of workman or mechanic needed to execute the contract, and shall specify in the call for bids for said contract, and in the contract itself, what the general prevailing rate of per diem wages in the said locality is for each craft or type of workman needed to execute the contract, * * *.

Continuing, the law provides a penalty of $10 for each laborer employed in violation of this law, and directs the public officials awarding the contract to withhold the amounts forfeited by such contractor. Section 3 of the law requires that accurate records be kept by the contractor showing the actual wages paid each worker. Section 4 defines the terms used in the statute. After defining what shall be considered "public works" the section provides:

> The term "locality in which the work is performed" shall be held to mean the city and county, county or counties in which the building, highway, road, excavation, or other structure, project, development or improvement is situated in all cases in which the contract is awarded by the State, or any public body thereof, and shall be held to mean the limits of the county, city and county, city, town, township, district, or other political subdivisions on whose behalf the contract is awarded in all other cases. The term "general prevailing rate of per diem wages" shall be the rate determined upon as such rate by the public body awarding the contract, or authorizing the work, whose decision * * * shall be final. * * *.

[1] For a complete copy of the California prevailing-wage law see Labor Review, February, 1932 (p. 310).

Anyone, either a public official or a contractor or subcontractor, violating his duty as prescribed in the act "shall be guilty of a misdemeanor" and punished therefor.

The statute was challenged upon three grounds: "(1) That said act is void for uncertainty; (2) that the burden thus attempted to be imposed * * * is in violation of section 12 of article 11 of the State constitution; and (3) that the act makes an invalid delegation of legislative power." The allegation of uncertainty was on the following grounds:

(*a*) In that the phrase "general prevailing rate of per diem wages" is not and can not be stated as a definite amount, (*b*) in that the phrase "work of a similar character" is too vague to permit definition and (*c*) in that the phrase "in the locality in which the work is performed" is in itself uncertain and is rendered less certain by the attempt made in the act to define it.

In answering these contentions the court pointed out, as being of prime importance, that the penal offense consists in the nonperformance of those things required by the act. The officers of the district are required, according to the terms of the act, to ascertain the "general prevailing rate of per diem wages in the locality in which the work is to be performed"; that rate is defined by the act to be the rate determined by the officers of the district awarding the contract and the decision of such body is made final and conclusive. Continuing, the court said:

When this final decision is made, no uncertainty would arise in the requirement that the schedule of rates of wages be inserted in the call for bids and in the contract itself. Nor would any uncertainty be encountered in entertaining complaints as to violations by the contractor of the terms of the contract, nor in determining upon investigation what, if any, deductions should be made from the final payment to the contractor by reason of such violation. When these duties are performed, the statute has been complied with by the public officers; and, when performed in good faith, no criminal or other liability may be invoked against them.

Next the court turned its attention to the duty imposed upon the contractors, subcontractors, or their representatives, and here again the court found no uncertainty. The duty imposed was the keeping of accurate records so that the amount paid each worker could be ascertained. The terms of the act outlining the duty, the court said, were not "so vague that men of common intelligence must necessarily guess at their meaning, and differ as to their application."

The following three cases were relied upon by the petitioner in attempting to have the law declared void: Connally *v.* General Construction Co.,[2] 269 U. S. 385, involving an Oklahoma statute; State *v.* Garfield Building Co.[3] (Arizona), 3 Pac. (2d) 983; and Mayhew *v.* Nelson [4] (Illinois), 178 N. E. 921. The court, distinguishing between these cases and the case at bar, said:

In the Connally case and in the case of State *v.* Garfield Building Co., it is observed that the statutes therein involved imposed the duty on the contractor to determine at his peril the current rate of wages, and the locality in which the work was to be performed was not defined. In the California statute the prevailing rate of wages, which must be deemed the same as the current rate of wages, is determined by the public body awarding the contract, and the locality to be considered in fixing the rate of wages is also defined. The statute in the Mayhew

[2] U. S. Bureau of Labor Statistics Bul. No. 417, p. 139.
[3] Labor Review, January, 1932, p. 49.
[4] Labor Review, March, 1932, p. 581.

case provided, as here, that the public body awarding the contract should determine the rate and the "locality" was designated. The Illinois court based its decision on its own reasoning and cited as authority for its conclusion two cases in its own jurisdiction and the case of People ex rel. Rodgers *v.* Coler, 166 N. Y. 1, 59 N. E. 716, without regard to the fact that the Coler Case was distinguished and not followed in the later case of Ryan *v.* City of New York, 177 N. Y. 271, 69 N. E. 599, where the New York statute, providing for the payment of "not less than the prevailing rate" of wages in the locality, was sustained.

In upholding the statute great reliance was placed upon the case of Atkin *v.* Kansas (191 U. S. 207), in which the court held the State had the right to place certain requirements and restrictions upon the construction of public works. Most of the opinion in that case deals with the 8-hour provision of the Kansas statute, but the provision on the prevailing rate of wage was also discussed and it was not held invalid. Cases in other States were cited and relied upon by the court in upholding the California statute. In New York the prevailing-wage statute was approved (Long Island R. Co. *v.* Department of Labor (1931), 177 N. E. 17); and the doctrine of the New York case was followed in Washington (Malette *v.* City of Spokane,[5] 137 Pac. 496), Wisconsin (Wagner *v.* City of Milwaukee,[6] 192 N. W. 994), and Maryland (Ruark *v.* International Union,[7] 146 Atl. 797). In basing its decision upon the Atkin case, the court said it had never been overruled and was not referred to in the Connally case, which "is not applicable to the case at bar for the reason that here we are not confronted with any uncertainty as to the nature or character of the particular offense that is declared a crime."

In response to the question of what is a prevailing wage, the court said no court could fix any definite amount as a prevailing-wage rate, for its determination depends upon the relation of the work "to time and place, both of which are within the purview and cognizance of the administrative board in each case."

The court found the phrases "work of a similar character" and "locality in which the work is performed" were not too vague, as the work and the locality could be determined with a reasonable certainty.

The second objection to the statute was that it violated the California constitution. This argument was based upon the theory that the payment of a prevailing-wage rate was in the nature of a tax and therefore such legislation must conform to the taxing powers of the State. The court held such payment was not a tax as contemplated by the State constitution. The court also denied the third objection, that it was an unlawful delegation of legislative power, and held that such action by the legislature was warranted and amounted only to a delegation to the board of power to exercise a discretion under and in pursuance of the law.

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[5] U. S. Bureau of Labor Statistics Bul. No. 112, p. 132; also Bul. No. 169, p. 191.
[6] U. S. Bureau of Labor Statistics Bul. No. 344, p. 262; also Bul. No. 391, p. 323.
[7] U. S. Bureau of Labor Statistics Bul. No. 548, p. 178.

In concluding the opinion, Mr. Justice Shenk quoted the language of Mr. Justice Harlan, speaking for the United States Supreme Court in the Atkin case, as follows:

> So, also, if it be said that a statute like the one before us is mischievous in its tendencies, the answer is that the responsibility therefor rests upon legislators, not upon the courts. No evils arising from such legislation could be more far-reaching than those that might come to our system of government if the judiciary, abandoning the sphere assigned to it by the fundamental law, should enter the domain of legislation, and, upon grounds merely of justice or reason or wisdom, annul statutes that had received the sanction of the people's representatives. We are reminded by counsel that it is the solemn duty of the courts in cases before them to guard the constitutional rights of the citizen against merely arbitrary power. That is unquestionably true. But it is equally true—indeed, the public interests imperatively demand—that legislative enactments should be recognized and enforced by the courts as embodying the will of the people, unless they are plainly and palpably, beyond all question, in violation of the fundamental law of the Constitution.

WORKMEN'S COMPENSATION

Victim of Sunstroke Awarded Compensation

THE Court of Appeals of the District of Columbia recently held that an employee who suffered a sunstroke while at work in the open thereby sustained an injury within the meaning of the District of Columbia workmen's compensation law. (Burris *v.* Hoage, 60 Washington Law Reporter, 574.)

From the facts in the case it appeared that the employee in question was at work with other laborers, removing certain material from a street in the city of Washington. The day was very hot and the place where the employee was at work had no protection by shade trees. About 11 o'clock in the forenoon the employee left his place of employment and started toward a water barrel for the purpose of quenching his thirst. While he was so doing he collapsed and died several hours later from heat prostration or sunstroke.

The deputy commissioner of workmen's compensation in the District of Columbia denied an award of compensation to the widow. An appeal was taken to the Supreme Court of the District of Columbia and on a petition for an injunction the court considered the deputy commissioner's conclusion in error and entered an order setting aside his finding. Upon appeal to the district court of appeals, this court had to consider the question of whether an employee who suffers a heat stroke while at work in the open sustains an injury arising out the employment within the meaning of the District of Columbia compensation law.

The insurance carrier contended that the injury was due to the abnormal heat to which the general public was subjected and not to any special hazard resulting from the occupation in which the employee was engaged at the time of the injury.

In reviewing the case, the district court of appeals was of the opinion that there was no evidence to sustain the deputy commissioner's findings. While it was conceded by all parties concerned that the deceased employee was engaged in manual labor on an unshaded street and on an intensely hot day, the high court was of the opinion that the employee's work required him to remain exposed to the sun's rays, which was not true of the community in general, and that his employment therefore exposed him to a risk essentially arising out of the work. The decision of the case, the court thought, depended upon the answer to two questions: (1) Is death from sunstroke an accidental injury; (2) did the sunstroke arise "out of and in the course of his employment." The court said that both questions should be answered in the affirmative. According to the definition of accidental injury within the meaning of the compensation act, the court pointed out that it included "any unexpected misfortune or mischance resulting in some form of bodily injury—an injury due to accident or caused by some sudden or unexpected occurrence."

In reviewing the circumstances under which the deceased employee was laboring on the day of his death, the court thought it was proper to say that, except for the conditions existing, the injury would not have occurred and death would not have necessarily ensued. The very statement of the facts of the case, the court continued, showed that the deceased was exposed to a hazard in the course of his employment that did not apply generally to the community and whenever this condition occurred and injury necessarily resulted, such injury may be said to arise out of and in the course of the employment. This in fact would be the proximate cause of the injury and therefore within the terms of the District of Columbia workmen's compensation act. The court in conclusion pointed out that the underlying purpose of all compensation laws is to provide money indemnity in the case of injury where there is no assignable fault. Mr. Justice Groner concluded his opinion by saying that—

> Accidents in industry are inevitable, and the enactment of compensation laws grew out of a general recognition of a duty owing by society to an injured employee to secure him protection, and this the act seeks to accomplish through the means of insurance built up by premiums paid by employers. Where there is doubt, it should be resolved in favor of the injured employee or his dependent family. In the circumstances shown in the record here, we think petitioner established a case of accidental death arising out of the employment and compensable under the statute. To reach a different conclusion would be to indulge subtlety at the expense of the plain purpose and intent of the law.

Preexisting Condition Held No Bar to Recovery of Compensation

THE Court of Appeals of the District of Columbia, in an opinion written by Mr. Chief Justice Martin, held that an injury arose out of and in the course of an employment in a case in which an employee, while using a hot-water hose, fell in an epileptic fit and because of the contraction of his muscles continued to hold the hose so that the hot water ran over his body, inflicting serious burns causing his death. (Georgetown College *v.* Hoage et al., 60 Washington Law Reporter, 555.)

This case was an appeal from a decree of the Supreme Court of the District of Columbia which set aside an order of the deputy commissioner of workmen's compensation in the District of Columbia rejecting a claim for compensation for death of an employee. From the facts in the case as stated in the finding of the deputy commissioner, it appeared that the deceased employee was engaged as a laborer on construction work at a hospital being erected by the university. While using a hot-water hose for defrosting cans in an ice plant of the employer, the employee was seized with an epileptic fit. The contraction of his muscles caused him to grasp the hose, which was emitting hot water and to hold it against his body; the burns thus inflicted subsequently caused his death.

The deputy commissioner held that the proximate cause of the injury was the epileptic seizure, which had no relation whatever to the employment. The deputy commissioner also found that the employment did not aggravate the preexisting epileptic condition. Upon appeal to the Supreme Court of the District of Columbia by the widow, the court held that the order of the deputy commissioner,

based upon facts, was not in accordance with the law. The contention of the employer was that the decree of the lower court had the effect of setting aside the order of the compensation commissioner upon a pure question of fact, which was beyond the court's authority since the statute authorized the court to set aside the compensation order only when not in accordance with the law. The only question, therefore, raised and to be decided by the court of appeals was whether the facts as found by the deputy commissioner showed as a conclusion of law that the death of the employee "arose out of and in the course of the employment." From the facts in the case the court of appeals held that the employee's death was caused by the burns and not by the epileptic condition, and that such burns were inflicted by means of an instrumentality in the hand of the employee which he was using in the course of his employment. The court called attention to the fact that a liberal interpretation in favor of an injured employee should be given, since workmen's compensation statutes in general are remedial. The court in concluding the opinion cited several cases and based its opinion principally upon a Massachusetts case. (Cusick's Case, 260 Mass. 421.) In that case an employee subject to epileptic fits had an attack while going down some cellar stairs. The Massachusetts court held that compensation could be recovered under the State workmen's compensation act, and in the course of its opinion referred to the fact that an employee not subject to epilepsy who fell upon the stairs while in the course of his employment would be entitled to compensation. The fact of suffering the epileptic attack did not, therefore, bar a recovery. It was shown that the protection of the statute was not limited merely to employees who are in good health but included all employees enumerated in the statute who are in the service of an employer under a contract of hire. The court of appeals of the District of Columbia also referred to the case of Rockford Hotel Co. *v.* Industrial Commission (300 Ill. 87), in which it was held that the employer was not liable in a case in which an employee was seized with a fit and fell to his death; in that case the injury was not considered one arising out of the employment. However, the District of Columbia court said that the majority of the courts, both American and English, have held that if the injury was due to a fall the employer is liable "even though the fall was caused by a preexisting idiopathic condition."

The court therefore affirmed the decree of the lower court and awarded compensation to the widow of the deceased employee.

Recent Compensation Reports

Ohio

A STATEMENT of the experience of the Ohio State insurance fund during 1931 and the announcement of the annual revision of rules and rates, effective July 1, 1932, is given in the August, 1932, issue of the Ohio Industrial Commission Monitor.

The financial statement of the fund shows total assets on December 31, 1931, of $47,505,140.05, and a surplus of $750,568.58. Receipts of premiums and interest earnings for the year totaled $11,544,899.14, while disbursements totaled $16,077,209.54, making an excess of disbursements over receipts of $4,532,310.40.

It is explained that during the year the total assets have been reduced $5,335,784.97, while the reserves for pending and incomplete claims show a reduction of only $3,109,656.69, affecting the surplus of the fund greatly. The statutory catastrophe reserve has been reduced from $2,346,899.06 to $1,883,563.35, partly due to claims of injured employees of employers who failed to insure and were financially irresponsible.

The general surplus has been reduced from $2,117,962.22 to $750,568.58, a reduction of $1,367,393.64, attributed to the result of factors accompanying the industrial depression of the year. Receipts declined 17.6 per cent, reflecting the reduction in employment as well as the reduction in pay rolls, while disbursements declined only one-half of 1 per cent, as these are but slightly affected by industrial depressions of the corresponding period. In 1931 the pay rolls of insured employers were 19.2 per cent lower than in 1930, and premiums collected were 19.5 per cent less.

The number of claims filed decreased from 193,005 in 1930 to 154,232 in 1931, a reduction of 20.1 per cent, but it is claimed that the fund is experiencing an abnormally increasing cost per claim in both compensation payments and medical cost. The average compensation cost per case in 1931 was 6.7 per cent over the 1930 cost, and 9.4 per cent over the 1929 cost. The average medical cost per case in 1931 was 12 per cent over the 1930 cost, and 20 per cent over the 1929 cost.

It is pointed out that costs are further increased through the tendency of courts and juries to allow cases, on appeal or review, which had previously been disallowed or terminated by the commission, and that the reduction of wage rates becomes an additional factor in lowering the premium income per man exposed while benefits are not reduced correspondingly. Medical, hospital, nursing, and funeral expenses are not based upon wage rates, and are not affected. Compensation benefits are based upon wage rates, but, as the weekly benefits are two-thirds of the weekly wages with a maximum of $18.75, the amounts are not affected when the wages remain above $28.13 per week. Wage-level fluctuations above $23.44 per week likewise do not affect the amount of death benefits paid to dependents of killed workers.

It has been found necessary, in view of these various factors, to increase the average basic premium rate level approximately 17 per cent. The revision carries increases in 345 classifications, decreases in 37, and no change in 200. The occupational disease rate remains, as previously, 1 cent per $100 of pay roll.

Employers are reminded that the rates were reduced from year to year during the period of high industrial activity and increase in wage levels, or not increased to the extent of the increases made in benefits, so that the rates, as now adjusted, are proportionately lower than in the earlier years of workmen's compensation, when compared with the benefits, and that the Ohio rates are at a much lower level than those of other States with comparable benefits.

The attention of the employers is also directed to the fact that each employer with an accident experience more favorable than the standard of their industry receives a credit reducing the individual rate, while an unfavorable experience results in a penalty increasing the rate. The extent of credit or penalty varies with the degree of deviation from the standard of the industry.

Wisconsin

AN ANALYSIS by industry of compensable cases settled in Wisconsin during 1931 is shown in Bulletin No. 41 of Wisconsin Labor Statistics, published by the Industrial Commission of Wisconsin. Figures for previous years are included.

It is pointed out that the construction industries, with less than 7 per cent of all employees coming under the workmen's compensation law, were responsible for 20 per cent of the total number of cases and 23 per cent of the total cost. A total of 469 cases, including 9 death cases, occurred in agricultural pursuits, which do not come under the compensation act unless the employer files affirmative election or takes out a compensation insurance policy covering farm labor; these cases cost approximately $80,000 in compensation benefits and medical aid.

The following table shows a distribution by industrial groups of the compensable cases settled in 1929, 1930, and 1931, with compensation cost and medical cost in fee cases for 1931.[1]

TABLE 1.—COMPENSABLE CASES SETTLED IN WISCONSIN, 1929, 1930, AND 1931, BY INDUSTRIAL GROUPS, AND BENEFITS PAID IN 1931

Industrial group	Number of compensation cases settled			Amount paid in 1931	
	1929	1930	1931	Compensation	Medical aid in fee cases
Agriculture	426	517	469	$53,152	$25,598
Mining	72	38	33	24,725	1,220
Quarrying	244	270	179	74,973	12,619
Chemicals	117	76	94	13,512	6,533
Clay, glass, and stone products	241	223	209	64,307	13,099
Food, beverages, and tobacco	1,276	1,319	1,349	210,153	71,020
Leather and leather products	281	243	212	11,677	7,188
Lumber and lumber products	2,974	2,665	1,780	285,137	109,886
Metal and metal products	5,171	3,777	2,376	544,706	130,982
Paper and paper products	859	730	613	121,437	35,872
Rubber and composition goods	181	96	88	37,965	7,393
Textiles	226	173	156	20,642	8,929
Vehicles, automobiles	1,174	582	413	141,307	24,386
Cleaning, dyeing	80	98	99	14,618	6,107
Printing and publishing	159	163	123	27,069	9,068
Construction	4,019	3,823	3,393	808,512	229,541
Trade	1,951	2,032	2,049	262,216	109,292
Personal and professional service	1,175	1,209	1,273	317,229	90,319
Public utilities and transportation	2,001	2,030	2,031	443,719	126,238
Industries not specified	3	6	4	9,139	851
All industries	22,630	20,070	16,943	3,486,195	1,026,141

Bulletin No. 42 of Wisconsin Labor Statistics is devoted to an analysis of the wage basis in compensation cases. It is explained that on March 14, 1931, the compensation benefits, which previously had been based on 65 per cent of the average weekly wages of the injured worker, were changed through legislative action to a basis of 70 per cent, but remained subject to the same fixed minimum and maximum weekly wage limits, $10.50 and $30.00.

The percentage of wage loss compensated varies with earnings and time loss, and the effect of the maximum wage limit is an important factor. An injured worker whose average weekly earnings had been

[1] Similar data for earlier years were published in Labor Review for June, 1930, and a summary of total cases, 1920 to 1931, by extent of disability, with time losses and benefit costs, was published in Labor Review for July, 1932.

$35 would, if disabled temporarily for more than 10 days, receive only 60 per cent of his actual earnings instead of 70 per cent, on account of the maximum limit. If the actual earnings had been $40 per week, the compensation would equal only 52.5 per cent, and at $50 actual earnings it would equal only 42 per cent. If the disability terminated in less than 10 days, the percentage received is still smaller.

It is shown that, for many years previous to the present depression, from 35 to 45 per cent of all compensation cases were settled on the maximum wage basis. In 1931, however, the extensive reduction in wage rates resulted in reducing the proportion of cases compensated on the maximum wage basis to 24.9 per cent.

Wage rates in various types of disability cases are analyzed by age and by sex, cases are classified by wage rates, and a detailed analysis by industry is given of wage rates in compensation cases settled in 1931.

Philippine Islands

According to the report of the Secretary of Commerce and Communications of the Philippine Islands for the calendar year 1930,[2] a total of 3,092 industrial injuries was reported to the bureau of labor during the year, as compared with 2,055 injuries reported in 1929, an increase of 50 per cent.

Compensation awarded in 1,521 cases closed during the year amounted to 56,969.85 pesos ($28,484.93)[3], an average of 37.45 pesos ($18.73) per case, while in 770 cases the disability did not extend beyond the 7-day waiting period and 140 cases either did not come under the provisions of the compensation act or were withdrawn. At the close of the year 661 cases were pending, including 92 fatalities. Medical, hospital, and funeral expenses reported paid aggregated 46,201.19 pesos ($23,100.60), but as the majority of the larger plantations and other industrial establishments maintain individual medical and hospital services and do not report the cost of treating each minor injury, the actual medical and hospital cost was considerably greater.

The nationality of the injured workers is shown as follows: Filipinos, 3,057; Chinese, 17; Japanese, 16; and Americans, 2. Nine of them were females, while 3,083 were males; 1,207 were married and 1,885 were single; 45 per cent of the injured were 20 and under 30 years of age.

The injuries consisted of 209 deaths, 139 permanent partial disabilities, and 2,744 temporary disabilities, of which 770 terminated in the first week and 775 in the second week. The time loss, based on the standard schedule of the International Association of Industrial Accident Boards and Commissions for deaths and permanent disabilities, is given as: Deaths, 1,254,000 days; permanent partial disabilities, 410,450 days; and temporary disabilities, 28,994 days.

The principal causes of the injuries were: Vehicles, 49 fatal and 528 nonfatal; handling of objects, 26 fatal and 509 nonfatal; falling objects, 31 fatal and 458 nonfatal; machinery, 38 fatal and 397 nonfatal; and falls of persons, 38 fatal and 350 nonfatal.

The following table shows the number of injuries reported in 1930, by industry.

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[2] Philippine Islands. Governor General. Annual report, 1930. Washington, 1932. (House Doc. No. 160, 72d U. S. Cong., 1st sess.)

[3] Conversions into United States currency on basis of peso=50 cents.

TABLE 2.—NUMBER OF INDUSTRIAL INJURIES REPORTED IN THE PHILIPPINE ISLANDS IN 1930, BY INDUSTRY

Industry	Number of injuries	Per cent of total
Land and water transportation, wharves, etc	1,049	33.93
Oils, fats, etc	102	3.30
Metal works, etc	186	6.02
Mining, quarrying, and other stone works	530	17.14
Food, drinks, tobacco, etc., manufacturing and distribution	494	15.98
Textiles, clothing, hats, shoes, and leather goods	6	.19
Building and engineering construction	93	3.01
Books, printing, publishing, etc	12	.39
Wood, furniture, sawmills, and lumber yards	318	10.28
Government activities	91	2.94
Miscellaneous and general labor	211	6.82
Total	3,092	100.00

SOCIAL INSURANCE

Effect of Social Charges Upon Costs of Production in Belgium

THERE has been much discussion as regards the effects of social charges—for unemployment insurance, old-age pensions, etc.—upon the cost of production, but information on this subject has been rather limited. Considerable interest, therefore, attaches to a recent lecture of Professor Cardyn of the University of Louvain, in which he attempted to estimate the effect of the social charges in effect in Belgium upon the costs of production of commodities produced in that country. His conclusions were that social charges amounted to approximately 5.5 per cent of direct wages and to approximately 0.9 per cent of the total costs of production. The following summary of Professor Cardyn's views is reproduced from the August 29, 1932, issue of Industrial and Labor Information of the International Labor Office:

The question was how far the charges imposed by social legislation entered into costs of production. Social charges were borne in part by the manufacturers, in part by the workers, and in part by the State. Charges on industry were thus twofold. In the first place, the cost of production rose with the amount of employers' contributions based on the wages paid; in the second place, it was increased by that part of the taxes on industry which the authorities utilized to meet the State's share of social charges.

Employers' contributions.—The speaker then examined the amounts paid by the employers. In the first place, family allowances imposed on the employer an annual charge of about 219 francs for every male worker and 147 francs for every female worker, or 1.7 per cent of the normal wage of male workers and 2 per cent of the normal wage of female workers. For pensions, manufacturers had to pay about 1.33 per cent of the wages covered by the act, these being wages of not more than 40 francs a day, or 11,400 francs a year. But three-fifths of the male workers were earning higher wages, and no contribution had to be paid for the part of the wage exceeding 11,400 francs. The whole wage of women workers, on the other hand, came within the scope of the act. The speaker estimated that manufacturers paid about 1.23 per cent of wages as their contribution to pensions.

In regard to social insurance, if the bill came into force the manufacturers would have to pay about 153 francs a year for each insured person. Only wages up to 12,000 francs a year, plus 1,000 francs for each child, were covered by the bill. Taking an average wage of 13,000 francs for men and 7,000 francs for women workers, the rate would be 1.17 per cent for the former and 2.18 per cent for the latter, but as no contribution was payable for the part of the wage in excess of the maximum, this average percentage should also be reduced by 0.1. The percentage of charges for women workers remained the same.

In regard to compensation for industrial accidents, the act imposed on manufacturers a charge which might be estimated at 1.67 per cent of wages. It must, however, be observed that this was an obligation to cover occupational risks, and consequently this insurance premium could not be considered solely as a social charge.

In proportion to the amount of wages, the manufacturers had thus to pay the following percentages for social charges:

PER CENT OF WAGES, CONTRIBUTED BY EMPLOYER, FOR SOCIAL INSURANCE IN BELGIUM

Charge	Men	Women
	Per cent	*Per cent*
Insurance	1.07	2.18
Pensions	1.23	1.23
Family allowances	1.68	2.00
Total	3.98	5.41

There were about two million workers in Belgium, of whom 80 per cent were men and 20 per cent women. If the charges were reduced to a single percentage in proportion to the total labor force of the country, the average rate would be found to be 4.266 per cent of wages.

These figures obviously represented averages and must be treated with reserve.

Indirect charges.—Besides these figures, which he described as direct charges, Professor Cardyn considered the extent of indirect social charges, or those paid by manufacturers in the form of taxes.

The social expenditure of the Ministry of Industry and Labor amounted to 10 per cent of the total expenditure of the State, which was 9,505,757,389 francs. Thus if an undertaking paid a given sum in taxes, 10 per cent of this sum would be used to meet the social charges of the State.

One of the largest undertakings in the country had supplied figures showing that it paid 232 million francs in wages and 24 million francs in taxes. Taxes thus represented 10 per cent of the wages paid. One-tenth of the taxes was applied by the State to social services. Thus, it could be estimated that the social charges borne by the State represented 1 per cent of wages. Industry thus paid towards social charges 4.26 per cent of wages directly and 1 per cent indirectly, or a total of 5.26 per cent.

To be exact, it would be necessary to allow for the costs of administration of social legislation. This was impracticable, but taking everything into account it seemed that social charges would not be underestimated if they were calculated at an average of 5.5 per cent of wages.

Effect on costs.—It must not, however, be concluded that costs of production were increased by 5.5 per cent by the application of social legislation. In practice, these costs would only increase to the extent to which social charges were based on the remuneration of the active part of the population, and to the extent to which wages entered into the determination of costs. The provisional result of the estimate should therefore be corrected in accordance with these two elements.

With regard to the first element, the proportion of the total population engaged in production was generally estimated at 50 per cent. It would thus be 4,000,000. But not all these persons were wage earners. According to the estimates of the Ministry of Industry and Labor, the social insurance act would only apply to about 2,000,000 workers, or half the active population. The other half was composed of various elements: Peasant proprietors, working their farms with the help of members of their families, so that their production was not subject to social charges; directors and high officials of undertakings, whose salaries were not subject to the regulations laid down by social legislation, except to a slight extent through the application of the act relating to pensions for salaried employees; and merchants and small employers whose profits or whose share in costs of production did not come within the scope of social insurance. All these persons held privileged positions and generally received high salaries. As their number amounted to about half the active population, it would certainly be no exaggeration to say that their earnings were 50 per cent higher than those of ordinary workers. Assuming then that the total of wages, salaries and fees of all kinds entering into costs of production represented 100, the share of the ordinary workers would be 40 and that of the rest of the active population 60.

Then 40 per cent of that part of the costs of production which represented the remuneration of labor was subject to social charges representing 5.5 per cent of such remuneration. Thus it followed that social charges represented an increase of 2.2 per cent in this part of the costs of production.

Costs other than wages.—This second provisional result, however, must be still further corrected.

It had been shown that social charges represented 2.2 per cent of that part of the costs of production which consisted of the remuneration of labor, but what did this part represent in proportion to the remainder of such costs?

This remainder included the price of raw materials, machinery, power, interest on capital, etc. Raw materials in Belgium were mostly imported, and social charges could not affect their prices. As to power, the price of coal was certainly increased by social charges, but that of electric power, which was produced almost without the use of labor, did not involve social charges. Finally, it was unnecessary to refer to social charges in connection with interest on capital.

It was impossible to arrive at an exact estimate of the proportion of costs of production represented by all the elements other than wages and salaries. An approximate estimate might be reached on the basis of the figures for the total national income, of which it had been estimated that wages represented 41 per cent. Applying this proportion to costs of production, it might be said that if such costs were represented by 100 the proportion devoted to the remuneration of labor would be 41, and the charges for raw materials, power, etc., 59. Thus, 41 per cent of the costs of production bore social charges representing 2.2 per cent of this fraction. The conclusion was that social charges represented 0.9 per cent of the costs of production.

Summarizing these conclusions, wages, salaries and fees of all kinds represented 41 per cent of the costs of production. Of the total of wages and salaries, only 40 per cent was subject to social charges. These social charges, which altogether amounted to 5.5 per cent of wages, thus represented only 0.9 per cent of the costs of production.

FAMILY ALLOWANCES

Report on Family Allowances by Quebec Commission

THE Quebec Provincial Social Insurance Commission, appointed in 1930, has recently issued in one volume its third and fourth reports, which deal, respectively, with the subjects of family allowances and industrial hygiene.

In its third report [1] the commission passes from the consideration of general child welfare problems to the particular problems of the workingman's family responsibilities and to the suggestion that workingmen should receive a supplement to their wages in the form of a State grant for each dependent child. The problem which family allowances are designed to solve is set forth in the report as follows:

> We may ask ourselves then what there is of equity and social justice in the salary offered to workingmen among us who have to support from 4 to 10 children. Families of that size—and are they not the most worthy of admiration?—must, in order to balance their budget, agree to painful restrictions, even in the case of necessities. The result will be that the large family, needing a larger house, better ventilated, with more sun, will have to remain satisfied with lodgings which are more cramped and less hygienic, because of the necessity of cutting down those expenses which can be curtailed. The same result will follow when it is a question of food and clothing. It will be necessary to reduce to their lowest sum all expenses in this department of the family economy.

It is suggested by those who advocate family allowances that the only way of restoring equilibrium in the budget of a large family is to grant a progressive allowance for each child in excess of the number of children in the average family (the average for Quebec is said to be 3). The actual proposal is to constitute a collective fund for the benefit of large families, which would be somewhat similar to the accident fund in the case of workmen's compensation.

In order to investigate social-insurance systems in different European countries, members of the commission went abroad. They also made a study of the family allowance systems in France and Belgium and embodied their conclusions in their report, which also contains an account of the present status of such benefits in Austria, Czechoslovakia, Germany, Great Britain, Italy, Netherlands, Poland, Spain, Sweden, Switzerland, Australia, and New Zealand.

The conclusions of the commissioners are given below:

1. Although recognizing that in Belgium and France, if not in Germany and Australia, family allowances have furnished a solution to the highly important problem of large families, the commission is of the unanimous opinion that at the present time there is no opportunity for the legal institution of such allowances in the Province of Quebec. The system is "adapted to low wages and it is very difficult to predict what would be the results of its application here." Although advocates of family allowances take cognizance of the Canadian wage rates by proposing to grant such allowances from the third child only, it must be remembered that in various industries, even

[1] Canada. Ministry of Labor. Labor Gazette, Ottawa, August, 1932, p. 861.

in the Dominion, wages are not so high and that "there is occasion to suggest their increase rather than to run the risk, by creating a system of family allowances, of keeping them for a long period at their present level."

2. The manufacturers of the Province of Quebec would perhaps be affected disadvantageously in relation to the industrialists of other Provinces, if its collective insurance fund, organized last year, were suddenly supplemented by a family-allowance system.

3. Existing economic conditions make it very difficult to take a step of this kind.

4. There is basis for serious apprehension that the drift of population from the rural districts of the Province would be given an increased momentum if the family-allowance system were limited to the industries.

5. "It would be impossible and dangerous to extend family allowances to the whole population and make them a State institution."

6. The tremendous agricultural problem of the Province of Quebec—the placement of farmers' sons or, in general, the problem of surplus population in the rural sections—would still be unsolved. Governmental resources should preferably be used to promote placement on provincial lands through an intensive colonization policy.

For the reasons set forth above, the commission has given up the idea of proposing the establishment of family allowances in the Province.

Social insurance has not yet been reported upon by the commission, but all the systems include special provisions for the protection of the family, and the family question will, therefore, be studied at a later date. No objection is offered by the commission to factory owners who may wish to organize of their own accord family-allowance funds, as has been done in France. Such procedure was seriously recommended to the commission by the director general of the French central committee on family allowances, and the commission concludes "that is the method of social initiative, the result of special education, which people in this Province will doubtless desire to follow."

Annual Congress on Family Allowances in France

THE Twelfth Annual French Congress on Family Allowances and Social Insurance held its opening session at Bordeaux on June 6, 1932, under the chairmanship of the president of the central committee on family allowances. Over 400 delegates were in attendance. They came from all parts of France and some from Belgium. A large number of family allowance funds, social insurance groups, and federations and unions of primary funds were represented.[1]

It was reported that despite the economic crisis there had been only a slight reduction in the number of heads of families receiving allowances and the number of children benefiting therefrom and an even smaller decrease in the amount of the allowances disbursed, while the appropriations for social service exceeded somewhat the 10,000,000 francs ($392,000) of last year.[2]

[1] La Journée industrielle, Paris, June 5–7, and 11, 1932.
[2] Conversions into United States currency on basis of franc at par=3.92 cents.

Among the principal subjects discussed at the Congress was the act of March 11, 1932, providing for a general compulsory system of family allowances.[3] A special report was presented on the activities and achievements of the family allowance fund of Bordeaux and the Southwest. Other reports dealt respectively with the demographic effects of family allowances; the reasons for direct coordination of the efforts for maternal and infant protection; and the results obtained after two years' application of the social insurance law.

Among the resolutions adopted by the congress was one proposing that the funds continue their cooperation in the social campaign of the country and that they initiate or favor collaboration with various other agencies in the struggle against sickness and misery.

At the agricultural session a resolution was passed urging that the family allowance act of March 11, 1932, be applied as soon as possible to rural wage earners and that the chambers of agriculture and other interested associations should study carefully the means by which a family-allowance system could be extended to small farmers.

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[3] For digest of act, see Labor Review, Washington, April, 1932, p. 796.

WORKERS' EDUCATION AND TRAINING

Educational Survey by International Federation of Trade-Unions

IN ACCORDANCE with a resolution adopted by the International Trade-Union Committee for Youth and Educational Questions and approved by the executive committee of the International Federation of Trade Unions, a report is compiled yearly from replies received from a questionnaire concerning the educational activities of the national centers affiliated with that federation. The third and latest survey on the subject included the educational work of these organizations in Austria, Belgium, Denmark, Germany, Great Britain, Holland, Latvia, Palestine, Poland, Spain, and Sweden. The report on the investigation is published in the April, 1932, issue of The International Trade-Union Movement, the official organ of the federation. The findings are given below.

Austria

IN AUSTRIA the Social Democratic Party and the trade-unions have formed a joint educational association—the National Workers' Educational Center. The actual work of the joint body, however, is classified under two heads—political and distinctly trade-union. Trade-union lecturers are left free to arrange their programs.

For the education of ordinary trade-union members numerous lectures and courses of lectures are provided for the evening or at week ends. Conducted tours, lantern slides, cinemas, etc., are also made use of for this purpose.

Union officials are trained in different trade-union schools established by the trade-unions themselves, some of these schools being for women, others for juveniles, for works councillors, for salaried employees, or for other special classes of workers. Among the subjects included in the curriculums of these institutions are specific trade problems, trade-unionism, labor law, civics, national economics, and social policy.

There are also special trade-union schools for training officials, and such schools provide not only theoretical teaching but also excursions, conduct visits of various kinds, and other types of educational work. The National Trade-Union School at Vienna is a notable institution, providing three courses and catering "last year" for 100 students. Mention is also made of the Social Democratic School and the Labor College.

Increasing use is being made of modern educational appliances such as gramaphone records, cinema, and wireless.

Belgium

IN BELGIUM the workers' educational activities for the 1930–31 session were as follows:

Courses.—There were 149 courses in French-speaking Belgium and 56 in Flanders. This was an increase of 9 and 10, respectively, as compared with the preceding session. The subjects and methods in these courses are adapted to the class membership. Among the special courses are those for trade-unionists, Socialists, municipal officials, cooperative societies, the women's movement, and youth work. Furthermore, there were three study "weeks" with 29 Walloon and 18 Flemish students in attendance.

Lectures.—In 1930–31 the number of lectures was 1,713 as compared to 1,665 in the preceding annual session. In Flanders in the later period the number increased to 736 as against 553 for the previous year. The recently inaugurated cinema lectures give promise of success.

Workers' travel movement.—Efforts are being made to amalgamate the French and Flemish branches of this work into a joint national organization of the International Friends of Nature.

Wireless.—The association of the French-speaking socialist wireless group—the "Resef"—is affiliated as an independent body with the national educational center. The "Sarov," the Flemish organization of socialist wireless owners, is not affiliated with that center. Both the Resef and the Sarov have, however, combined in a national association.

Courses for young trade-unionists.—Some 2,000 youthful unionists participated in classes conducted by the Workers' Educational Center in 10 different places. At the close of the year reviewed, 40 of the best students were sent, at the expense of the National Trade-Union Center, to the Labor College for a 1-week special course.

Denmark

EARLY in 1930, the Workers' Educational Movement in Denmark acquired the college at Roskilde, which can accommodate 93 students. It is reported as always full, both for the numerous summer courses and for the 6 months' college course. The financial provision for this institution was adequate enough to allow for the establishment of a library.

In 1929 the Esbjerg Labor College was enlarged so that it could accommodate 90 students. At the time the report was made a three months' summer course for young girls had been planned. In this connection a modern school kitchen and all the necessary appliances for domestic teaching have been provided.

Labor schools.—In the winter of the year reported upon there were five labor schools held with a total attendance of 510. The purpose of these schools is to train particularly promising individuals within the workers' educational movement. The institutions are used jointly by trade-unions and party sections, etc. The instructions are economic and political, and the organization which sends the students bears the expense. As the next step after the ordinary labor school the establishment of a trade-union school to cover several months is in contemplation but as yet nothing has been done.

Evening schools.—The conditions in the evening schools have greatly improved as a result of the passage of the evening school act of March 19, 1930. Such schools may now be established without limitation as to numbers. Persons other than regular teachers may

be instructors in these schools. Local or provincial authorities may make grants to such schools if the average attendance is at least 10. The year before the report was compiled there were 46 evening schools and the attendance reached 4,354, the corresponding figures for the preceding year being 32 schools and 2,108 in attendance.

Lectures.—Forty-one courses of lectures were provided during the winter, some of these being lantern lectures. The attendance was 29,000.

Education for unemployed.—Various provincial towns were provided by the Workers' Educational Center with day courses for the unemployed, usually in connection with the local trade schools. Of the costs, one-third was borne by the local authority and two-thirds by the unemployment fund. To obtain a grant, the school curriculum must have the approval of the town council and the board managing the unemployment fund. These day courses were attended by a total of 1,422 students.

Study circles.—Study circles were formed in Copenhagen, and in the towns and Provinces, to the number of 476.

Special courses.—In the summer half-year there were series of special courses in both labor colleges, specially intended for trade-union officials, Social Democratic town councilors, youth leaders, and cooperative society officials, and treating of socialist cultural work and domestic science. Many unions also arranged special courses for their own members, such as the metal-workers' union (a course for works' councilors). Especially worthy of note was the work of the railwaymen's union, whose study circles were attended by 549 persons.

Scholarships for foreign colleges.—In 1930 a Scandinavian People's College was organized by the Scandinavian employees in the League of Nations and the International Labor Office. The Workers' Educational Center representatives participated in the preparatory work. "The executive decided not to go further for the present as the school work of the center takes up all its time." A scholarship, however, has been granted to this college and also to the German Labor College at Tinz.

Film center.—Since the last questionnaire investigation was made, a film center has been set up and has been operating with much success.

Holiday and research tours.—Arrangements have been made for several research and holiday tours to other countries, for example, Germany and France.

Financial report.—The total amount of money figuring in the balance sheet was 85,019.93 kroner ($22,785). This included a State grant of 18,000 kroner ($4,824) and also a share in the surplus profits of the agricultural lottery, amounting to 4,000 kroner ($1,072).[1]

Germany

General Federation of German Trade-Unions

IN MAY, 1930, work began in the General Federation of German Trade-Unions' new school at Bernau, near Berlin. The latest statistics submitted to the International Federation of Trade-Unions for this educational undertaking are given below:

[1] Conversions made on basis of krone=26.8 cents.

COURSES IN GENERAL FEDERATION OF GERMAN TRADE-UNIONS' SCHOOL AT BERNAU

Type and number of courses	Length of course	Number of students		
		Men	Women	Total
Introductory courses:	*Weeks*			
23 (18 unions)	4	743	11	754
6 (1 union)	2	238	2	240
1 (advanced)	4	36	2	38
8 (trade) [1]	2	303	3	306
38 Total		1,320	18	1,338
Special courses: [2]	*Days*			
4	14	146	6	152
4	8	131	15	146
2	3	79		79
1 (week-end)		34	6	40
11 Total		390	27	417
49 Grand total		1,710	45	1,755

[1] The trade courses were for the following occupational groups: Fire-brigade men, civil servants, State postal and telegraph workers, tramway men, members of supervisory boards (similar to boards of directors), persons working on behalf of municipal enterprises, motor-lorry drivers, workers of gas, water, and electricity works.

[2] The special courses were for the following groups of officials: Youth leaders, treasurers and managers of small trade-union branches, leaders of local committees, works' council members, workers' council members with seats on supervisory boards.

The faculty includes a director and two full-time teachers. In addition there are visiting teachers who deal regularly with special subjects. Members of the executives of the unions of the Center and other persons are also asked to give instructions or lectures on particular topics.

The district secretariats of the General Federation of German Trade-Unions in their week-end courses concentrate mainly on social and labor legislation, such courses being followed largely by officials in the employment of public bodies.

For years there has been special training for labor judges, persons authorized to conduct lawsuits, members of labor offices (labor exchanges) and members of works councils, and more recently courses have been added for members of trade courts of arbitration, members of executives and councils of sickness insurance centers, officials of trade councils and in a few cases, for officials cooperating in the public trade schools. The A. D. G. B. trade councils organized 1,677 evening courses (attendance 77,532) and 180 day courses (677 days and 9,007 students). A considerable number of courses were held for youth leaders, sometimes week-end courses and sometimes courses lasting from 1 to 2 weeks: These were attended by some 900 persons and dealt with the subjects needed for such work. In these courses practical experiments have been made in the arrangement of social evenings, discussions, games, hikes, etc. Many unemployed have taken part in these courses; now and then special courses were arranged for the unemployed. Good results have been obtained in the special arrangements made to employ leisure time, especially for young unemployed. Young unemployed were brought together in special "homes," where they could forget their unhappy surroundings and their daily cares for a short time and draw new strength from another environment.

One hundred and fifteen trade-unionists attended the 1930–31 sessions of the State industrial schools (for economics and administration) in Berlin and Düsseldorf, and the Academy of Labor in Frankfort on Main, of whom 61 received maintenance grants from the A. D. G. B. Twenty-one students were also sent at the cost of the A. D. G. B. to attend the men's or women's courses held at the residential labor college at Tinz in Gera.

In the period under review there was an increase in the expenditure for the trade-union press which has an important rôle in educational work. The information in certain of these trade-union publications is utilized in various courses.

Cooperation between the trade-unions and the public schools is reported as intensified, as such cooperation promotes workers' education. As a result of trade-union influence, college education is less of a monopoly than formerly. The regulations concerning the qualifications for trade teachers in Prussia have been so revised that persons who have been through a trade-education course and practical men and women who pass a test for capacity, in which experience in life and in the particular trade outweighs mere memorized information, may now become trade teachers and are allowed to enter college. Preparatory courses for those wishing to take the capacity tests which are given in addition to those for practical work are eliminating the barriers to the progress of the wage-earning class.

In connection with the debates on extending the compulsory-education period, the question of the best use of the ninth year of compulsory school has been studied by the General Federation of German Trade-Unions, which has also set forth its views on this matter in a public statement.

Federation of Unions of German Salaried Employees

The educational activities of the German salaried employees' movement are carried on by the individual unions constituting the nonmanual workers' center. Many arrangements have been made for widespread educational work and education in specific trade-union problems through courses and sessions on trade, economic, and social subjects.

In the year covered by the report four courses of a week each were held, the total attendance being 101 students. Among those availing themselves of these educational opportunities were union officials, workers, councilors on supervisory boards, and public-service employees. There were also 11 week-end courses with an aggregate attendance of 579 students.

Great Britain

THE education committee of the British Trades-Union Congress, in addition to its own direct activities, sends representatives to a number of outside educational bodies, for example, Ruskin College, the Workers' Educational Association, the National Council of Labor Colleges, and the boards of the universities of Oxford and Cambridge, which deal with extramural studies. The report for the year under review shows a gradual increase in activity in the various branches of education. In addition to the progress in all the existing methods of education there have been new beginnings of much promise.

There were 88 applications from members of affiliated unions for six scholarships granted at Ruskin College. Scholarships were made available for three trade-unionists at the universities of Oxford or Cambridge. A joint consultative committee has been created for the purpose of dealing with the after careers of extramural students of the universities.

Ten scholarships (from 53 applications) were granted to the I. F. T. U. Summer School. The Third Trades-Union Congress Summer School was held at Ruskin College from July 11 to 25, 1931, and was attended by 76 students, representing 17 organizations. There were three foreign students (one from the German Building Workers' School). The special subjects were: (1) Trade-union accountancy and administration, (2) workmen's compensation, and (3) survey of industrial relations and industrial negotiations. Lectures were also given on health and safety in factories, the Royal Commission on Unemployment Insurance, and the trade-unions (amendment) bill of 1930.

Educational experiments were made with wireless. The general council purchased five wireless sets, which it loaned to trade councils. Listening groups were organized, and group leaders assigned to take charge of the discussions following each talk. The Trades-Union Congress was encouraged enough by the results to decide to continue these experiments the next year.

Holland

In Holland, trade-union educational activities are intrusted to the Institute of Workers' Education, which is under the joint management of the national trade-union center and the Socialist Party. In the year covered by the report the membership increased from 2,831 to 24,169, and the number of individual subscribers from 1,498 to 6,320. Educational work was carried on in 111 sections and 21 smaller groups; 2,512 students attended 18 week-end courses for officials; and the combined audiences of the 603 moving-picture exhibitions numbered 180,000. The labor actors' group, established in September, 1930, gave 83 theater and 19 wireless performances. There were also three labor holiday weeks at Troelstra-Oord, the holiday home of the workers' educational movement.

The activity of the Workers' Educational Institute has been extended by its combination with the Friends of Nature, a workers' travel association. The national trade-union center and the Socialist Party have jointly founded a labor college which, however, is independent of the Workers' Educational Institute. With a view to preventing the isolation and overlapping of numerous small educational and cultural undertakings, a committee of all the cultural organizations of the labor movement has been created, which tries to bring about uniformity where it is desirable. Greater uniformity is also the objective of a magazine which has been issued since January 1, 1931, in the interest of workers' education and cultural progress.

Latvia

Each year in the larger towns the national center of Latvia arranges courses for training trade-union officials. Most of the unions have lecture evenings and other similar educational schemes. The national center has a labor museum at Riga with branches in certain other towns, which organizes courses, lectures, and exhibits, and carries on scientific research in hygiene and labor technique. In Riga there are also a number of smaller libraries and reading rooms which various unions maintain. Furthermore, the unions have certain educational activities of their own within their particular fields of influence. In

addition the labor organizations cooperate with the following national bodies: Committee for Education Outside Schools, Union of People's Colleges, the Cultural Union of Music and Song, and the Labor Theater.

Palestine

In Palestine the trade-unions not only do the educational work for adults, but the educational work for youth, and even education in the elementary schools is in the hands of these organizations as there is no compulsory educational system in this country.

The national center maintains, therefore, 21 schools with 1,216 children, 41 kindergarten schools with 840 children, and 4 transition classes with 17 children, 95 teachers being employed in this work. All these schools are constructed on the principles of the labor school.

For young workers there are 5 evening schools with 400 students, in order to compensate for the state education which is lacking. There are also 9 clubs, and a workshop for trade instruction in metal working.

Evening courses for adults have been instituted by the unions and have had an attendance of 700 students, also language courses for immigrants and lectures all over the country on topics of current interest. A traveling library with 90 branches has 75,000 volumes. Foreign and native magazines are available at the numerous reading rooms in various parts of Palestine.

Poland

The educational work of the labor movement is headed up in the Association of Labor Universities (T. U. R.). The activities of the trade-unions are restricted to vocational work in their locals, the lecturers being provided by the T. U. R. Recently the Cracow, Lemberg, and Warsaw trades councils arranged special courses running from 4 to 6 weeks.

Spain

From October 1 to April 30 courses are held at the evening school of the National Trade-Union Center of Spain in Madrid. Arrangements are also made for visits to museums, works and offices, etc. "The last course held during the session 1929–30 was attended by 50 students. The subjects dealt with are general knowledge (80 lessons), socialism (80 lessons), economics and the cooperative system (26 lessons), social legislation (26 lessons), foreign languages (126 lessons)." Among the subjects of special lectures were rationalism and labor organization from the standpoint of different trades and occupations. Three representatives of the school were sent to the Labor College at Brussels.

Among the additional courses scheduled for the school year 1931–32 are those on trade-unionism, labor law, and international law. Trade-unions make grants to defray the expenses of operating the schools. These grants in 1930 totaled over 10,000 pesetas ($1,170) of which 8,800 pesetas ($1,030) was expended during that period.[2]

[2] Conversions into United States currency on basis of average exchange rate of peseta for 1930=11.7 cents.

Sweden

THE Swedish trade-unions' educational activities are mainly carried on under the auspices of the Swedish Workers' Educational Center which is affiliated with the national trade-union center. The workers' educational center arranges study courses and lectures on a variety of subjects, among them socialism, trade-unionism, the cooperative system, history, economics, psychology, civics, and municipal management. During the year July 1, 1930, to June 30, 1931, there were 22,958 persons who availed themselves of these opportunities, compared with an attendance of 19,609 at similar educational evenings in the preceding year. This educational center also organizes each year several 2-week courses for training educational workers, to which the unions and trade councils send their representatives. Scholarships for so-called correspondence courses are also given by the unions.

The national educational center, however, does not participate in many of the arrangements made for the training of trade-union members. For some years the national trade-union center has had a residential college at Brunnsvik, which is under the management of Comrade Sigfrid Hansson and organizes 3-month courses each cummer. In winter individual unions may avail themselves of the college for their own special courses. Certain unions have holiday courses of their own during the summer.

COOPERATION

Development of the Cooperative Movement Throughout the World

DATA compiled by the Bureau of Labor Statistics covering the various phases of the cooperative movement throughout the world show more than 400,000 societies of all types in 37 countries. Of these 37 per cent are credit societies, 35 per cent are agricultural associations, and 10 per cent are consumers' (distributive) societies. In 21 countries for which membership figures are available, the cooperators numbered more than 70,000,000, about 70 per cent of whom belonged to the consumers' organizations.

Soviet Russia and India lead as regards number of societies.

As regards consumers' societies, Soviet Russia outstrips by a long way all the other countries, in point of membership. In that country, however, membership in a cooperative association can not be said to be entirely voluntary as is the case in other countries; it may be said rather, to be compulsory, in the sense that the cooperative store is generally the main avenue through which food supplies can be obtained. Considering the development of the movement on the basis of population, Czechoslovakia leads (with more than 60 per cent of the population members of consumers' societies), with Russia, Great Britain, and Finland following in the order named.

In 24 countries for which data were obtained, the consumers' societies do an annual business of nearly 11 billion dollars—four-fifths of which is in Russia. Excluding that country, Great Britain is far in the lead, with more than $952,000,000 worth of business done in the depression year of 1931. The depressed economic conditions and lowered prices have had their effect on the amount of business done, but reports available indicate that, notwithstanding, the cooperative societies are expanding their membership and are handling a volume of goods even larger than before the depression began.

The sales of the cooperative wholesale societies of 23 countries in 1931 aggregated nearly $900,000,000.

Many and varied lines of manufacture have been undertaken by the consumers' cooperative movement in the various countries, though in no case do the goods manufactured form any considerable proportion of the total goods handled by the movement. The value of the products cooperatively made in 1931, in 7 countries (Finland, Germany, England, Norway, Poland, Scotland, and Sweden) amounted to $187,000,000.

Distribution of Cooperative Societies According to Type

TABLE 1 shows the number of societies of the different types in the latest year for which data are available, in 37 countries. This table shows a total of more than 400,000 societies, of which 37 per cent are credit societies, 35 per cent are agricultural societies, and less than 10

per cent are consumers' societies. It should be pointed out in this connection that, in the consumers' movement, a decreasing number of societies does not mean necessarily a slackening off in the development of the movement; it has for some years been the policy, in the countries most advanced in consumers' cooperation, to unite the smaller societies in a region into one large powerful society. In France this policy has been carried so far that even as early as 1928 the regional societies ("development" societies, as they are called), while forming less than 15 per cent of the whole number of consumers' societies, had nearly 30 per cent of the total membership and were doing 31 per cent of the entire business done by the consumers' movement.

TABLE 1.—NUMBER OF COOPERATIVE SOCIETIES OF VARIOUS TYPES IN SPECIFIED COUNTRIES

Country	Year	Consumers' societies	Credit societies	Agricultural societies	Workers' productive and labor societies	Housing and construction societies	Other types	Total
Argentina	1928–29	36	16	139	.....	2	29	222
Australia	1929	166	.....	[1] 249	.....	.....	.....	415
Austria	1930	302	2,308	1,672	.....	300	790	5,372
Belgium	1927–28	378	1,042	1,658	88	114	1,625	4,905
British Malaya	1929	.....	105	.....	33	.....	.....	138
Bulgaria	1929	815	2,246	532	384	235	1,670	5,882
Canada	1930	325	183	498	.....	.....	260	1,266
China	1929	.....	818	.....	.....	.....	.....	818
Czechoslovakia	1930	1,840	[2] 6,057	4,348	826	1,590	608	15,269
Denmark	1929	1,936	.....	6,445	.....	.....	5	8,386
Estonia	1929	250	210	790	.....	.....	[3] 1,250	[3] 2,500
Finland	1929	[1] 803	1,556	818	.....	.....	2,825	6,002
France	1930	[3] 3,325	.....	.....	564	.....	.....	3,889
Germany	[4] 1931	1,703	21,653	18,362	788	4,539	4,987	52,032
Great Britain	1930	1,248	.....	1,418	78	283	128	3,155
Greece	1928	115	3,801	1,187	.....	341	799	6,243
Iceland	1929	39	.....	.....	.....	.....	54	93
India	1929–30	.....	87,668	3,662	.....	.....	15,577	106,907
Irish Free State	1930	.....	114	[2] 299	.....	.....	.....	413
Italy	1930	3,329	.....	3,742	1,146	.....	120	8,337
Japan	1930	425	[5] 12,104	.....	.....	.....	1,553	14,082
Latvia	1930	295	352	450	.....	.....	424	1,521
Lithuania	1930	320	460	632	8	2	29	1,451
Netherlands	1929	460	897	1,280	28	146	304	3,115
Norway	1929	410	.....	[6] 2,821	.....	.....	.....	3,231
Palestine	1930	.....	52	39	27	34	21	[7] 173
Poland	[8] 1930	6,128	6,169	2,516	.....	864	1,124	16,801
Portugal	1929	150	.....	.....	.....	.....	121	271
Rumania	1930	2,122	4,757	2,447	.....	.....	950	10,276
Siam	1929–30	.....	128	.....	.....	.....	.....	128
South Africa	1930	13	.....	429	.....	.....	.....	442
Soviet Russia	1930	9,779	.....	[9] 78,064	18,363	.....	.....	106,206
Straits Settlements	1929	.....	29	.....	.....	.....	.....	29
Sweden	1930	1,609	361	3,857	175	5,295	3,357	14,654
Switzerland	1930	1,164	3,526	2,920	203	260	3,803	11,876
United States	1929	1,529	974	11,950	20	45	3	14,521
Yugoslavia	1930	[10]	4,418	[11] 2,026	92	81	460	7,077

[1] Includes a few societies of other types.
[2] Year 1929.
[3] Approximate.
[4] Jan. 1, 1932.
[5] Including 9,655 societies which have other activities as well.
[6] Including fishery societies.
[7] Actually in operation; there were 249 societies registered.
[8] Jan. 1, 1931.
[9] Year 1928.
[10] Included with agricultural societies.
[11] Includes the consumers' societies also.

Membership figures for all types of societies are more difficult to get, and recent figures were available for only 21 countries, shown in Table 2. These, however, have a combined membership, allowing for

duplications because of membership in more than one type of organization,[1] of more than 70,000,000 persons. The consumers' movement is accountable for by far the largest group of members—some 70 per cent of the total.

Credit cooperation predominates in Bulgaria, Czechoslovakia, India, and Rumania.

TABLE 2.—MEMBERSHIP OF VARIOUS TYPES OF COOPERATIVE SOCIETIES IN SPECIFIED COUNTRIES

Country	Year	Consumers' societies	Credit societies	Agricultural societies	Workers' productive and labor societies	Housing and construction societies	Other types	Total[1]
Australia	1929	145,486	----------	[2] 121,015	----------	----------	----------	266,501
British Malaya	1929	----------	16,658	----------	7,104	----------	----------	23,762
Bulgaria	1929	31,894	190,572	34,643	2,146	4,420	196,488	460,163
Canada	1930	26,155	45,767	598,490	----------	----------	23,577	693,989
China	1929	----------	21,934	----------	----------	----------	----------	21,934
Czechoslovakia	1929	[3] 461,541	1,464,968	[4] 300,000	([5])	([5])	([5])	2,226,509
Denmark	1929	331,500	----------	570,129	----------	----------	482,342	1,383,971
Finland	1929	[2] 456,386	138,762	70,675	----------	----------	([5])	665,823
France	1930	[6] 2,288,838	----------	----------	17,108	----------	----------	2,305,946
Great Britain	1930	6,353,000	----------	[7] 290,617	31,563	27,097	([5])	6,702,277
India	1929–30	----------	[2] 4,176,675	----------	----------	----------	----------	4,176,675
Italy	1930	[8] 900,000	----------	760,248	[8] 107,000	----------	[8] 50,000	1,817,248
Latvia	1930	50,320	[4] 15,000	54,030	----------	----------	93,237	212,587
Lithuania	1930	35,617	98,300	12,136	([5])	([5])	([5])	146,053
Norway	1929	[9] 104,157	----------	[7] 110,221	----------	----------	----------	214,378
Portugal	1929	[8] 34,000	----------	----------	----------	----------	42,214	76,214
Rumania	1930	289,961	1,003,082	201,360	----------	----------	[10] 84,686	1,579,089
Siam	1929–30	----------	2,157	----------	----------	----------	----------	2,157
South Africa, Union of	1930	13,251	----------	49,326	----------	----------	----------	62,577
Soviet Russia	1930	48,904,200	----------	[4] 8,508,100	2,002,000	----------	----------	59,414,300
United States	1929	206,387	264,908	[8] 3,000,000	1,405	2,435	78,819	3,553,954

[1] Figures in this column include some duplication, due to membership of some persons in several societies of different types.
[2] Includes membership of a few societies of other types.
[3] Membership of societies affiliated to central union in 1930.
[4] Approximate membership of societies affiliated to central union in 1928.
[5] No data.
[6] Data are for year 1929.
[7] Including membership of fishery societies.
[8] Approximate.
[9] Membership of societies affiliated to central union.
[10] Not including membership of 60 school societies.

Position of Consumers' Cooperation

THE consumers' cooperative movement is especially strong, as regards membership, in Czechoslovakia, Finland, France, Great Britain, Italy, and Soviet Russia. In such countries as Bulgaria, Denmark, Latvia, and Norway, consumers' cooperation and agricultural cooperation are about evenly balanced.

The development of consumers' cooperation in relation to population is shown in Table 3. This table understates the situation in many cases, as the membership given relates only to the central organizations which, while usually including the greater part of the consumers' cooperative societies do not include them all. Notwithstanding, the table shows that more than 60 per cent of the people in Czechoslovakia and nearly 43 per cent in Soviet Russia are cooperators. From this the percentages range down to 13 per cent in

[1] Thus the same person might be a member of a consumers' society, a credit society, an agricultural marketing society, etc.

Finland and nearly 15 per cent in Great Britain. The smallest degree of development is found in Canada, Portugal, South Africa, the United States, and Yugoslavia, all with less than 1 per cent of the population in membership in consumers' cooperative societies.

If the proportion of population served through cooperative stores is considered, the percentages would be much larger than are shown, for the figures given cover only members and do not allow for their families. Thus, it was estimated in 1928 that in France about 22 per cent of the population received their food supplies through the cooperative stores. In Estonia it is estimated that some 250,000 persons, or nearly 25 per cent of the population, are served by the consumers' societies. In England nearly two-fifths of the people obtain their supplies through the movement.

TABLE 3.—DEVELOPMENT OF CONSUMERS' COOPERATION IN PROPORTION TO POPULATION IN VARIOUS COUNTRIES

Country	Year	Population	Membership of consumers' societies	
			Members	Percent of population
Australia	1929	6,488,707	145,486	2.24
Austria	1930	6,675,283	[1] 263,137	3.94
Belgium	1930	8,060,189	[2] 428,260	5.31
Bulgaria	1930	5,596,800	[1] 56,706	1.01
Canada	1930	9,934,500	26,155	.26
Czechoslovakia	1930	726,158	[1] 461,541	63.56
Denmark	1930	3,550,651	331,500	9.34
Estonia	1930	1,110,538	[1] 34,561	3.11
Finland	1931	3,582,406	[2] 470,414	13.13
France	1929	40,745,874	2,288,838	5.62
Germany	1931	62,348,782	[2] 3,771,761	6.05
Great Britain	1931	44,790,485	[1] 6,626,429	14.79
Hungary	1929	8,683,740	[2] 722,476	8.32
Iceland	1929	103,317	7,676	7.43
Italy	1930	42,118,835	[3] 900,000	2.14
Latvia	1930	1,900,045	50,320	2.65
Lithuania	1929	2,340,038	35,617	1.52
Netherlands	1930	7,902,388	[1] 189,970	2.40
Norway	1930	2,890,000	[1] 110,076	3.81
Poland	1930	30,212,962	[1] 395,106	1.31
Portugal	1929	5,628,610	[3] 34,000	.60
Rumania	1930	17,393,149	289,961	1.67
South Africa, Union of	1930	6,928,580	13,251	.19
Soviet Russia	1931	161,006,200	[3] 69,000,000	42.86
Azerbaidjan	1929	2,162,955	[1] 512,500	23.69
Georgia	1930	2,637,961	846,600	32.09
Ukrania	1929	28,887,007	6,863,000	23.76
Sweden	1931	6,141,671	[1] 481,319	7.84
Switzerland	1930	4,018,500	[1] 395,616	9.84
United States of America	1929	122,775,046	206,387	.17
Yugoslavia	1930	13,290,000	113,241	.85

[1] Membership of societies affiliated to central union.
[2] Membership of societies affiliated to two central unions.
[3] Approximate.

The business done by the local consumers' societies for the latest available year—mainly 1930 and 1931—is shown in Table 4. Here again the table understates the real situation in those countries in which data were available only for societies affiliated to the central union. The societies covered by the table do an annual business of nearly eleven billion dollars, about four-fifths of which is accounted for by the Russian societies. Eliminating Russia, Great Britain is the outstanding country, followed at a considerable distance by Denmark and Germany.

TABLE 4.—MEMBERSHIP AND BUSINESS OF LOCAL CONSUMERS' SOCIETIES IN SPECIFIED COUNTRIES

[Conversions into United States currency, in most cases, on basis of average exchange rate for year]

Country	Year	Number of societies	Number of members	Sales
Australia	1929	166	145,486	$37,413,276
Austria [1]	1930	115	263,137	20,833,401
Belgium:				
Office Coopératif Belge	1930	54	282,425	113,784,693
Société Coopérative Fédérale de Belgique	1930	49	145,835	48,700,592
Bulgaria [1]	1930	57	56,706	2,870,136
Canada [1]	1931	31	8,122	2,874,746
Czechoslovakia:				
Ústřední svaz československých družstev	1930	1,035	461,541	39,372,283
Allgemeiner Verband	1930	[2] 179	236,727	17,751,742
Denmark	1931	[3] 1,791	[3] 331,500	419,948,100
Estonia [1]	1930	238	34,561	4,700,184
Finland:				
K. K.[4]	1931	112	241,633	25,608,000
Y. O. L.[4]	1931	420	228,781	36,168,000
France	1929	3,296	2,288,838	149,409,000
Germany:				
Zentralverband	1931	966	2,979,210	273,795,480
Reichsverband	1931	277	[3] 792,551	([5])
Great Britain [1]	1931	1,336	6,626,429	952,718,740
Hungary:				
Hangya	1930	1,647	[2] 672,295	19,924,307
Société coopérative des fonctionnaires de la Hongrie	1929	110	50,181	5,733,679
Iceland [1]	1929	[6] 39	7,676	4,873,284
Italy	1930	3,329	([5])	78,000,000
Latvia	1930	295	50,320	6,079,500
Lithuania	1929	214	35,617	121,155
Netherlands [1]	1930	131	189,970	([5])
Norway [1]	1930	445	110,076	29,583,314
Portugal	1929	150	34,000	1,575,000
Soviet Russia	1931	45,455	69,000,000	8,446,000,000
Azerbaidjan [1]	1929	254	512,500	90,301,645
Georgia	1930	([5])	846,600	95,275,000
Ukrania [1]	1929	9,007	6,863,000	1,954,926
Sweden [1]	1931	802	481,319	88,044,000
Switzerland [1]	1930	523	395,616	57,595,072
Yugoslavia	1930	190	113,241	5,564,939
United States	1929	656	204,368	64,665,369

[1] Data are for the societies affiliated to central union.
[2] Data are for year 1929.
[3] Data are for year 1930.
[4] Initials of name of central union; latter is commonly known by these.
[5] No data.
[6] Of these, 36 are both consumers' and marketing societies.

Cooperative Wholesale Societies

After the local distributive cooperative business becomes sufficiently large in volume, the next step in consumers' cooperation is usually the undertaking of wholesaling. All of the countries of the world in which the movement has made any strides now have one or more cooperative wholesale societies. There has also been some progress in wholesaling along international lines. Thus, the wholesales of the three Scandinavian countries in 1918 formed the Scandinavian Cooperative Wholesale Society for this purpose; in 1928 the two cooperative wholesale societies of Finland also affiliated with it. Its business in 1931 amounted to $7,526,961.

The formation of an International Cooperative Wholesale Society has been the subject of discussion and of study by international committees of cooperators for a great many years. In 1919 a skeleton organization was finally set up, with the idea of gradually developing the international exchange of cooperative goods. At the end of 1931 the wholesale societies or central cooperative unions of 26 countries had affiliated with it. Thus far the society has done no

actual trading itself. Its activities have been directed toward the development of trade directly between the central cooperative organizations of the different countries and the collection and distribution of information to that end.

Table 5 shows the business done by the wholesales of the various countries in 1931. This shows a combined wholesale business in that year of nearly nine-tenths of a billion dollars. Great Britain is far in the lead, with Germany in second place, but Belgium, Denmark, Finland, France, Sweden, and Switzerland also had large wholesale sales.

TABLE 5.—BUSINESS DONE BY COOPERATIVE WHOLESALE SOCIETIES IN 1931

[Conversions into United States currency on basis of average exchange rate for year]

Country	Number of affiliated societies	Amount of business	Country	Number of affiliated societies	Amount of business
Australia: New South Wales	[1]	$2,788,924	Great Britain:		
Austria	[2] 143	12,541,555	English wholesale	1,084	$369,594,491
Belgium:			Scottish wholesale	[2] 251	75,064,898
Fédération des Sociétés coopératives belges	[1]	26,434,400	Hungary: Hangya	[2] 1,647	10,178,164
Société coopérative fédérale de Belgique	[2] 49	8,260,598	Iceland	[6] 39	[6] 4,278,620
Bulgaria: "Napred"	[1]	3,070,340	Italy	[1]	5,002,058
Canada:			Latvia: "Konsums"	[2] 212	232,732
Manitoba Cooperative Wholesale	52	274,321	Lithuania:		
Saskatchewan Cooperative Wholesale	35	488,174	L. K. B. S.[3]	[4] 236	1,198,000
Czechoslovakia:			L. Z. U. K. S.[3]	[2] 41	2,311,000
V. D. P.[3]	[4] 347	14,128,604	Netherlands	[1]	7,088,120
G. E. C.[3]	[2] 175	9,427,588	Norway	454	7,530,117
Ustredné Družstvo	[1]	2,186,780	Poland: "Spolem"	[2] 925	9,212,345
Denmark: F. D. B.[3]	[2] 1,791	32,881,000	Sweden	802	37,453,216
Ringkobing	[1]	816,125	Switzerland:		
Estonia: E. T. K.[3]	[2] 238	4,034,543	V. S. K.[3]	527	32,376,338
Finland:			V. o. l. G.[3]	[1]	7,424,983
O. T. K.[3]	[2] 112	13,560,000	Concordia	[2] 54	779,316
S. O. K.[3]	[2] 423	20,724,000	United States:		
France	[5] 1,423	29,250,000	Central Cooperative Wholesale	99	1,509,752
Germany:			Eastern Cooperative Wholesale	10	268,044
G. E. G.[3]	920	101,107,097	Farmers' Union State Exchange (Nebraska)	[2] 165	1,571,028
"Gepag"	277	16,745,792	Scandinavian Cooperative Wholesale	5	7,526,961

[1] No data.
[2] Data are for 1930.
[3] Initials of name of wholesale; latter is commonly known by these initials.
[4] Data are for 1929.
[5] Data are for 1928.
[6] Data are for 1929–30.

Of 18 countries for which data on sales for 1930 and 1931 are available, those of Switzerland, France, and Italy showed increases, of varying amount. Those of the remainder (Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, England, Estonia, Finland, Germany, Hungary, Netherlands, Norway, Poland (Spolem), Scotland and Sweden) showed decreases. To a considerable extent, however, the decreases were due to lower prices.

Data as to net gain on the 1931 business are available for only a few countries:

Canada:	
Manitoba wholesale	$2,306
Saskatchewan wholesale	5,495
Finland:	
O. T. K	225,600
S. O. K	338,400
France	137,046
Germany: Zentralverband	13,263,200
Poland	16,846
Switzerland: V. S. K	179,515
United States:	
Central	12,035
Eastern	2,490
Farmers' Union Exchange	[2] 39,236

Production by Consumers' Societies

In varying degrees the cooperative movements of the various countries have undertaken the manufacture of commodities needed by their membership. Usually the productive enterprises are carried out by departments or subsidiaries of the cooperative wholesale society. In Belgium, however, a central productive organization, the General Cooperative Society, has been formed which has taken over practically all of the manufacturing enterprises. Many of the larger local societies or groups of societies also carry on some production—usually of such things as bakery products, coffee roasting, and grinding of feed or meal.

Table 6 shows the commodities manufactured, or the productive enterprises carried on, by the central cooperative organizations of 20 countries. It is seen that while only a beginning has been made in such countries as Bulgaria, and the Netherlands, some of the other countries, such as Germany, England, Finland, and Czechoslovakia, have made considerable progress in supplying their members with cooperatively made goods. England still leads as regards both the variety of goods produced and the total value of output.

It is seen that the manufacture of soap, shoes, flour, and candy, and the roasting of coffee are the lines most commonly undertaken. Clothing and hosiery are also frequently manufactured.

National tastes and the demands of the movement also have played a considerable part in determining the lines of business undertaken, as have also general conditions within the country. Thus the predilection of the natives for smoked, cured, and pickled fish and meat in such countries as Ukrania, the Scandinavian countries, Russia, Czechoslovakia, Finland, and Germany was undoubtedly the cause of the production of such commodities by the wholesale societies. Inability to obtain supplies, except at prices regarded as unduly high, led to the manufacture in Sweden of such goods as overshoes, electric-light bulbs, matches, etc.

As far as known, England is the only country whose cooperative movement mines coal or builds motor cars. The wholesale societies of England and Scotland operate, through the English and Scottish Joint Cooperative Society, extensive tea plantations in Ceylon and India. The wholesale societies of these two countries also have for a number of years been farming a considerable acreage; in 1930 these farms totaled some 17,000 acres.

[2] Amount returned in dividends on purchases.

TABLE 6.—COMMODITIES PRODUCED BY CENTRAL CONSUMERS' COOPERATIVE ORGANIZATIONS OF SPECIFIED COUNTRIES

Austria	Bulgaria	Estonia	Netherlands	Ukrania
Clothing. Confectionery. Edible paste.[1] Shoes. Textiles. Underwear.	Flour. Rock-salt mining.	Alcohol. Coffee roasting. Fish, cured. Nails. Wine, fruit.	Cheese. Jam. Soap.	Bakery goods. Butter. Fish, canned. Flour. Soap. Vegetables, canned.
France	**Poland**	**Hungary**	**Scotland**	**Switzerland**
Candy. Clothing. Coffee roasting. Eau de Cologne. Fruit, canned. Sardines, canned. Shoes. Vegetables, canned.	Bags, paper. Candy. Flour. Polish, shoe. Sacks, gunny. Soap. Varnish.	Brushes. Candles. Chemicals. Cutlery. Liqueurs. Matches. Mustard. Rope and twine. Soap.	Blankets. Brushes. Clothing. Corn meal. Flour. Furniture. Paper. Preserves. Rope and twine. Shoes. Soap. Tobacco.	Coffee roasting. Corn meal. Furniture. Lard. Printing. Pudding powders. Shoes. Spices. Yeast.
Belgium	**Norway**	**Denmark**	**Soviet Russia**	**Sweden**
Boxes, metal. Candy. Chicory. Cigars. Coffee roasting. Corn meal. Hats. Hosiery. Margarine. Mustard. Overshoes. Shoes. Soap. Sirup.	Bakery goods. Cheese. Clothing. Coffee roasting. Flour. Leather. Margarine. Meat products. Polish, shoe. Shoes. Soap. Tobacco.	Bicycles. Candy. Chemicals. Cigars. Clothing. Coffee roasting. Flour. Harness. Hosiery. Leather. Margarine. Mustard. Paper. Rope. Shoes. Shoes, wooden. Soap. Spices. Tobacco. Wine.	Candy. Coffee roasting. Corn meal. Feather down. Fruit, canned. Leather. Meat products. Molasses Nails. Shoes. Soap. Spices. Starch. Tea blending. Tobacco. Vegetable oils. Wire.	Chemicals. Corn meal. Electric-light bulbs. Flour. Margarine. Matches. Meat products. Overshoes. Phosphates. Rubber tires. Shoes. Soap.

[1] Macaroni, spaghetti, noodles, etc.

TABLE 6.—COMMODITIES PRODUCED BY CENTRAL CONSUMERS' COOPERATIVE ORGANIZATIONS OF SPECIFIED COUNTRIES—Continued

Czechoslovakia	Germany	Finland	England	
Bakery goods.	*G. E. G.*[2]	*S. O. K*[4]	Bacon.	Jewelry.
Baking powder.			Bedding.	Lard.
Brooms.	Boxes, wooden.	Bags, paper.	Bicycles.	Leather.
Butter.	Brushes.	Bricks.	Biscuits.	Lumber.
Cheese.	Candy.	Brushes.	Brushes.	Margarine.
Chemicals.	Cheese.	Candy.	Butter.	Motor cars.
Chicory.	Chocolate.	Chemicals.	Canned goods.	Motor cycles.
Chocolate.	Chemicals.	Chicory.	Cheese.	Paints.
Coffee roasting.	Cigars.	Coffee roasting.	Chemicals.	Picture framing.
Confectionery.	Clothing.	Crackers.	Cigars.	Pottery.
Cosmetics.	Coffee, malt.	Edible paste.[1]	Chocolate.	Preserves.
Edible paste.[1]	Edible paste.[1]	Fruit, canned.	Clothing.	Rope and twine.
Fish products.	Fish, cured.	Hosiery.	Coal mining.	Scales.
Flour.	Flour.	Lumber.	Cocoa.	Shoes.
Fruit, preserved.	Fruit, canned.	Margarine.	Coffee roasting.	Soap.
Hosiery.	Furniture.	Matches.	Confectionery.	Tea blending.
Jam.	Lumber.	Paper.	Corsets.	Textiles.
Meat products.	Matches.	Vegetables, canned.	Cutlery.	Tin plate.
Mustard.	Meat products.	Woodworking.	Drugs.	Tobacco.
Pickles.	Mustard.		Farming.	Trunks, bags, etc.
Polish, metal.	Polish, shoe.	*O. T. K.*[3]	Flour.	Umbrellas.
Polish, shoe.	Soap.		Furniture.	Underwear.
Ribbon.	Textiles.	Boxes.	Glass bottles.	Vinegar.
Sauerkraut.	Tobacco.	Chemicals.	Hardware.	Yeast.
Shoes.	Vegetables, canned.	Clothing.	Harness.	
Spices.		Coffee roasting.	Hosiery.	
Suspenders.	*Gepag*[3]	Fertilizers.		
Trousers.		Flour, rye.		
Underwear.	Cigars.	Herring, pickled.		
Vanilla.	Coffee roasting.	Margarine.		
Vinegar.	Edible paste.[1]	Matches.		
Wine, fruit.	Printing.	Underwear.		
	Sausage.			
	Soap.			

[1] Macaroni, spaghetti, noodles, etc.
[2] Wholesale society Grosseinkaufs-Gesellschaft Deutscher Konsumvereine.
[3] Wholesale society Grosseinkaufs- und Produktions-Aktiengesellschaft Deutscher Komsumvereine.
[4] Wholesale society, Suomen Osuuskauppojen Keskuskunta r. l.
[5] Wholesale society, Osuustukkukauppa r. l.

Value of goods produced.—The value of the goods manufactured by the national wholesales or other central organizations in 1931 is available for only a few countries, shown below.

Finland:	
O. T. K	$1, 588, 800
S. O. K	2, 733, 487
Germany:	
G. E. G	34, 297, 099
Gepag	2, 360, 000
Great Britain:	
England	103, 665, 769
Scotland	23, 117, 555
Norway	3, 463, 311
Poland	802, 816
Sweden	15, 205, 806

Cooperative Employment

The cooperative organizations of the various countries afford employment to a considerable number of persons, in the distributive and productive departments. The statement below shows the number of persons in cooperative employment in 13 countries; unless otherwise noted, the data are for 1930:

	Employees
Great Britain:	
Retail societies	182, 598
Wholesale societies	141, 979
Tea society	1, 864
Insurance society	5, 150
Distributive federations	165
Consumers' productive societies	15, 517
Special societies	101
Total	347, 374
Austria (central union)	895
Belgium:	
Central union	6, 582
Productive societies	1, 150
Canada (central union)	[3] 250
Czechoslovakia (central union)	789
Finland (S. O. K.)	1, 796
France (central union)	982
Germany:	
Zentralverband	[3] 55, 592
Gepag	9, 718
Hungary (central union)	785
Netherlands (central union)	324
Poland	731
Sweden (central union)	2, 998
Switzerland (central union)	643
United States	[4] 4, 195
Grand total	434, 804

[3] 1931. [4] 1929.

SOURCES.—This article is based on data from Peoples Yearbook, 1932; Schweizerischer Konsumvereine (Basel), July 2, 1932; International Labor Directory, Part VI (Geneva), 1929; and current issues of Cooperative Information (International Labor Office, Geneva) and Review of International Cooperation (London). In addition other data for specific countries were obtained from the following sources: *Argentina.*—Report of American consul at Buenos Aires, June 10, 1931. *Australia.*—Commonwealth Bureau of Census and Statistics, Official Year Book of Australia, No. 24—1931 (Canberra). *Austria.*—Bundesamt für Statistik, Statistisches Handbuch (Vienna, 1931). *Belgium.*—Ministère de l'Industrie, du Travail et de la Prévoyance sociale, Revue de Travail, Jan.-Feb., 1932; Ministère de l'Intérieur et de l'Hygiène, Annuaire statistique de la Belgique, 1929–1930; and La Coopération belge (Brussels), Feb. 10, 1932. *Bulgaria.*—Direction générale de la Statistique, Statistique des coopératives dans le royaume de Bulgarie en 1929 (Sofia, 1931). *Canada.*—Department of Labor, Report for fiscal year ending March 31, 1931; Quebec, Department of Municipal Affairs, Statistical Yearbook, 1931; and Canadian Cooperator (Brantford, Ont.), July, 1932. *China.*—Quarterly Journal of Economics (Cambridge, Mass.), May, 1931. *Czechoslovakia.*—Office de Statistique, Rapports (1931) No. 16, No. 17, and No. 76 (Prague). *Denmark.*—Statistiske Departement, Statistisk Aarbog, 1931 (Copenhagen). *Finland.*—Statistiska centralbyrån, Annuaire statistique de Finlande, 1931 (Helsingfors); and Bank of Finland, Monthly Bulletin, March, 1932. *France.*—Ministère du Travail et de la Prévoyance sociale, Bulletin, Oct.-Nov.-Dec., 1931; Revue des Études Coopératives (Paris), July-Sept., 1929, and July-Sept., 1931. *Germany.*—Report from American consul general at Berlin, June 24, 1932; and Zentralverband Deutscher Konsumvereine, Jahrbuch, 1932 (Hamburg). *Great Britain.*—Ministry of Labor Gazette, October and December, 1931, and January, 1932; The Producer (Manchester), April and May, 1932; La Coopération belge (Brussels), Mar. 1, 1932; and Canadian Cooperator (Brantford, Ont.), June, 1932. *Greece.*—Statistique générale de la Grèce, Annuaire statistique de la Grèce, 1930 (Athens). *Iceland.*—Bureau de Statistique, Annuaire statistique de l'Islande, 1930 (Reykjavik). *India.*—East India Commercial Intelligence Department, Statistical Abstract for British India (London, 1931), (Cmd. 3686); Cooperative movement in India, by Eleanor Hough (London, P. S. King & Son, 1932). *Ireland.*—Report from American consul at Dublin, Mar. 16, 1932. *Japan.*—Ministry of Agriculture and Forestry, Statistical Abstract, 1930 (Tokyo). *Lithuania.*—Bureau central de Statistique, Annuaire statistique de la Lithuanie, 1929–1930 (Kaunas). *Norway.*—Statistiske Centralbyrå, Statistisk Aarbok for Kongeriket Norge, 1930 (Christiania). *Palestine.*—Great Britain, Colonial Office, Palestine—Report on immigration, land settlement and development, 1930, by Sir John Hope Simpson (London), (Cmd. 3686). *Portugal.*—Kooperatören (Stockholm), Häfte 3, 1932. *Soviet Russia.*—Information Bureau of Centrosoyus (Moscow), No. 23, 1931. *Sweden.*—Socialstyrelsen, Kooperativ Verksamhet i Sverige år 1930 (Stockholm, 1932); Kooperativa Förbundet, Berättelser, 1931; Kooperatören (Stockholm), Häfte 9–10, 1932; and report from American consul at Stockholm, June 14, 1932. *Switzerland.*—Verband Schweizerischer Konsumvereine (V. S. K.), Rapports et comptes sur l'activité des organes de l'union en 1931 (Basel); and Schweiz-Konsumvereine (Basel), Nov. 7, 1931.

Status of Building and Loan Associations in 1931

THAT the depression has affected the building and loan associations, like all other lines of business, is shown by data supplied to the Bureau of Labor Statistics by the United States Building and Loan League (Cincinnati). Up to the end of 1930, while there had been a gradual decrease in the number of these associations since 1920, their aggregate membership and their total assets had increased steadily. Between 1930 and 1931, however, the number of associations decreased from 11,767 to 11,442, their combined membership decreased from 12,336,754 to 11,338,701, and their total resources fell from $8,824,119,159 to $8,417,375,605.

The table following shows, by States, the number of building and loan associations, their aggregate membership, and their total assets at the end of 1931. As it shows, Pennsylvania, New Jersey, and Ohio are (in order) the leading States as regards total resources. They are also the leaders, in different order, however (Ohio, Pennsylvania, and New Jersey), in point of number of members.

MEMBERSHIP AND RESOURCES OF BUILDING AND LOAN ASSOCIATIONS IN 1931

State	Number of associations	Number of members	Total assets	State	Number of associations	Number of members	Total assets
Alabama	40	39,440	$28,080,387	Nevada	3	1,440	$1,026,888
Arizona	9	7,050	4,960,208	New Hampshire	29	17,625	14,217,425
Arkansas	67	61,571	44,810,774	New Jersey	1,559	1,107,731	1,201,973,615
California	200	550,000	453,007,351	New Mexico	18	5,250	5,015,799
Colorado	67	85,870	59,136,661	New York	302	585,471	443,252,364
Connecticut	42	36,133	26,436,580	North Carolina	229	95,208	85,348,383
Delaware	44	20,500	16,118,223	North Dakota	22	21,100	14,154,371
Dist. Columbia	24	83,307	81,861,000	Ohio	768	2,378,811	1,158,281,871
Florida	67	12,400	15,975,572	Oklahoma	80	214,678	126,343,461
Georgia	40	18,419	7,015,133	Oregon	27	46,000	27,009,782
Idaho	14	7,850	5,168,892	Pennsylvania	3,268	1,236,297	1,250,692,072
Illinois	913	905,500	466,600,631	Rhode Island	8	49,041	34,639,798
Indiana	386	400,800	288,584,111	South Carolina [1]	152	32,000	25,550,000
Iowa	76	66,405	48,104,496	South Dakota	22	10,768	6,329,555
Kansas	152	193,771	126,319,718	Tennessee	40	24,970	18,496,924
Kentucky	159	187,000	121,821,568	Texas	145	174,550	127,285,978
Louisiana	101	190,496	170,871,291	Utah	24	85,654	53,245,524
Maine	36	28,444	25,515,436	Vermont	14	6,210	5,297,011
Maryland [1]	1,100	320,000	210,000,000	Virginia	94	66,570	60,365,508
Massachusetts	227	499,523	560,103,042	Washington	66	220,256	72,895,967
Michigan	66	219,174	165,269,540	West Virginia	61	56,350	37,741,341
Minnesota	77	118,155	43,334,358	Wisconsin	186	278,795	281,233,267
Mississippi	47	27,380	18,680,105	Wyoming	11	18,500	9,893,947
Missouri	240	268,082	206,364,643	Hawaii	10	14,003	5,007,087
Montana	27	37,903	20,920,378				
Nebraska	83	205,250	137,017,569	Total	11,442	11,338,701	8,417,375,605

[1] Figures estimated.

Comparison with the data for 1930 shows that increases in both membership and assets occurred in Delaware, the District of Columbia, Georgia, Kentucky, Minnesota, North Dakota, Rhode Island, and Wyoming. Increases in membership only were shown in Iowa, Michigan, and South Dakota, and increases in assets only in Arizona, Arkansas, Connecticut, Maine, New Hampshire, New York, Tennessee, Vermont, and West Virginia. All of the rest of the States showed decreases in both membership and assets.

INDUSTRIAL DISPUTES

Strikes and Lockouts in the United States in August, 1932

DATA regarding industrial disputes in the United States for August, 1932, with comparable data for preceding months are presented below. Disputes involving fewer than six workers and lasting less than one day have been omitted.

Table 1 shows the number of disputes beginning in 1927, 1928, 1929, 1930, and 1931, the number of workers involved and man-days lost for these years and for each of the months, January, 1930, to August, 1932, inclusive, as well as the number of disputes in effect at the end of each month and the number of workers involved. The number of man-days lost, given in the last column of the table, refers to the estimated number of working-days lost by workers involved in disputes which were in progress during the month or year specified.

TABLE 1.—INDUSTRIAL DISPUTES BEGINNING IN AND IN EFFECT AT END OF EACH MONTH, JANUARY, 1930, TO AUGUST, 1932, AND TOTAL NUMBER OF DISPUTES, WORKERS, AND MAN-DAYS LOST IN THE YEARS 1927 TO 1931

Month and year	Number of disputes		Number of workers involved in disputes		Number of man-days lost in disputes existing in month or year
	Beginning in month or year	In effect at end of month	Beginning in month or year	In effect at end of month	
1927, total	734	----------	349,434	----------	37,799,394
1928, total	629	----------	357,145	----------	31,556,947
1929, total	903	----------	230,463	----------	9,975,213
1930, total	653	----------	158,114	----------	2,730,368
1931, total	894	----------	279,299	----------	6,386,183
1931					
January	57	19	10,150	2,905	181,169
February	52	29	20,473	10,677	223,660
March	49	26	26,453	28,012	476,904
April	73	39	27,135	22,687	770,512
May	115	46	28,000	15,603	400,509
June	90	47	18,795	15,223	511,926
July	73	51	49,434	56,683	612,864
August	79	36	11,019	14,759	1,157,013
September	117	65	36,092	37,427	493,649
October	77	45	34,384	29,380	1,052,095
November	62	39	13,219	13,690	355,818
December	50	21	4,145	1,318	150,064
1932					
January	79	37	11,105	4,648	117,298
February	50	30	31,140	28,691	417,966
March	51	28	31,966	11,660	685,949
April	73	34	17,707	20,066	572,121
May	79	43	43,403	49,232	1,220,202
June	64	38	16,010	23,540	927,996
July [1]	53	36	18,360	31,413	689,436
August [1]	52	37	28,570	27,639	704,944

[1] Preliminary figures subject to change.

Occurrence of Disputes

TABLE 2 gives, by industrial groups, the number of strikes beginning in June, July, and August, 1932, and the number of workers directly involved.

TABLE 2.—INDUSTRIAL DISPUTES BEGINNING IN JUNE, JULY, AND AUGUST, 1932

Industrial group	Number of disputes beginning in—			Number of workers involved in disputes beginning in—		
	June	July	August	June	July	August
Auto, carriage, and wagon workers	1			45		
Bakers		4			48	
Barbers	4	1		3,285	600	
Broom and brush workers		1			17	
Building trades	14	12	7	1,014	8,283	398
Chauffeurs and teamsters	4	3	1	404	195	19
Clerks, salesmen	1			30		
Clothing	10	13	17	332	910	18,822
Food workers	1		1	60		21
Furniture	2	1	2	25	300	1,050
Hotel and restaurant workers		1			70	
Iron and steel		1	1		150	800
Laundry workers			1			700
Longshoremen and freight handlers	1			15		
Metal trades	1			200		
Miners	3	3	2	5,300	700	367
Motion-picture operators, actors, and theatrical workers	1	2	1	7	30	10
Paper and paper-goods workers	3			783		
Printing and publishing	1	1	2	19	42	130
Municipal workers	2	1		3,000	35	
Textiles	8	6	14	813	6,870	2,939
Other occupations	7	3	3	678	110	3,314
Total	64	53	52	16,010	18,360	28,570

Size and Duration of Disputes

TABLE 3 gives the number of industrial disputes beginning in August, 1932, classified by number of workers and by industrial groups.

TABLE 3.—NUMBER OF INDUSTRIAL DISPUTES BEGINNING IN AUGUST, 1932, CLASSIFIED BY NUMBER OF WORKERS AND BY INDUSTRIAL GROUPS

Industrial group	Number of disputes beginning in August, 1932, involving—					
	6 and under 20 workers	20 and under 100 workers	100 and under 500 workers	500 and under 1,000 workers	1,000 and under 5,000 workers	10,000 workers and over
Building trades	4	1	2			
Chauffeurs and teamsters	1					
Clothing	2	3	8		3	1
Food workers		1				
Furniture			1	1		
Iron and steel				1		
Laundry workers				1		
Miners			2			
Motion-picture operators, actors, and theatrical workers	1					
Printing and publishing	1		1			
Textiles	1	4	8	1		
Other occupations	1			1	1	
Total	11	9	22	5	4	1

In Table 4 are shown the number of industrial disputes ending in August, 1932, by industrial groups and classified duration.

TABLE 4.—NUMBER OF INDUSTRIAL DISPUTES ENDING IN AUGUST, 1932, BY INDUSTRIAL GROUPS AND CLASSIFIED DURATION

Industrial groups	Classified duration of strikes ending in August, 1932						
	One-half month or less	Over one-half and less than 1 month	1 month and less than 2 months	2 and less than 3 months	3 and less than 4 months	4 and less than 5 months	5 and less than 6 months
Bakers	1						
Building trades	3	1	1				
Chauffeurs and teamsters	1			2			
Clothing	12	2	3	1			
Food workers		1					
Furniture		1		1			
Laundry workers	1						
Miners		1			1	1	1
Motion-picture operators, actors, and theatrical workers				1			
Printing and publishing	2						
Textiles	9	2					
Other occupations	1			1			
Total	30	8	4	6	1	1	1

Conciliation Work of the Department of Labor in August, 1932

By HUGH L. KERWIN, DIRECTOR OF CONCILIATION

THE Secretary of Labor, through the Conciliation Service, exercised his good offices in connection with 65 labor disputes during August, 1932. These disputes affected a known total of 36,705 employees. The table following shows the name and location of the establishment or industry in which the dispute occurred, the nature of the dispute (whether strike or lockout or controversy not having reached the strike or lockout stage), the craft or trade concerned, the cause of the dispute, its present status, the terms of settlement, the date of beginning and ending, and the number of workers directly and indirectly involved.

There were 34 cases involving the law on the prevailing rate of wages. In these cases it is not always possible to show the number involved, due to lack of information as to total number required before completion of construction.

On September 1, 1932, there were 18 strikes before the department for settlement and, in addition, 43 controversies which had not reached the strike stage. The total number of cases pending was 61.

LABOR DISPUTES HANDLED BY THE CONCILIATION SERVICE DURING THE MONTH OF AUGUST, 1932

Company or industry and location	Nature of controversy	Craftsmen concerned	Cause of dispute	Present status and terms of settlement	Duration		Workers involved	
					Beginning	Ending	Directly	Indirectly
					1932	1932		
Garment workers, Newark and Passaic, N. J.	Strike	Garment workers	Protest against sending work to outside shops.	Pending	Aug. 2		1,600	
Follansbee Bros. Mill, Columbus, Ohio.	Lockout	Iron and steel workers.	Company refused to continue negotiations relative wage scales, etc.	do	July 27		800	
Coal miners, Indiana	Controversy	Coal miners	Wages and conditions	Adjusted. Settled by parties at interest. Accepted 25 per cent wage cut, to $4.57; 3-year contract.	Aug. 1	Sept. 12	4,500	
Doll workers, Greater New York	Strike	Doll makers	Asked 35 per cent increase and 8-hour day.	Adjusted. Allowed union recognition; little change in wages or conditions.	July 15	do	400	3,500
Made Well Shoe Co., Lynn, Mass	do	Shoe workers	Union recognition	Pending	Aug. 5		15	
Marilyn Shoe Co., Lynn, Mass	do	Cutters and lasters	Union recognition and wage increase.	do	do		30	
Cooper Rain Wear Manufacturing Co., New York City	do	Rainproof garment workers.	Violation of agreement by sending work to outside shops.	do	July 11		30	5
Men's clothing makers, Greater New York.	do	Clothing workers	Protest wage cuts and working conditions.	Adjusted. Signed agreement	Aug. 4	Aug. 8	20,000	
Kleber Trunk Co., Pittsburgh, Pa.	do	Trunk makers	Protest against low wages	Adjusted. Allowed wage increase	Aug. 12	Aug. 14	4	10
Suffolk Coal Co., South Scranton, Pa.	do	Miners	Protest employment of new workers while former workers were out of work.	Adjusted. Agreed to hire former workmen.	Aug. 8	Aug. 10	120	2
Sunshine Farms (Inc.), New York City.	do	Milk-truck drivers	Asked wage adjustment and recognition of food workers' union.	Pending	Aug. 3		22	11
M. Kasarsky & Co., New York City.	do	Fur workers	Wages and working conditions	Adjusted. Agreement concluded	Aug. 1	Aug. 15	20	6
Palace Sportwear Co. (Inc.), New York City.	do	Knitters and finishers.	Restoration of wage cuts; recognition.	Adjusted. Allowed as requested	Aug. 15	Aug. 22	45	15
Fenster Bros., New York City	do	Fur workers	Wage adjustment and recognition	Adjusted. Recognition of union allowed.	Aug. 12	Aug. 15	49	9
Shoe cutters, Lynn, Mass	Threatened strike.	Shoe cutters	Working conditions	Pending	Aug. 25		300	
Needle trades, 15 shops, South River, N. J.	Strike	Women's clothing	Wages, hours, and conditions	do	Aug. 26		2,160	
West Virginia Newspaper Publishing Co., Morgantown, W. Va.	Lockout	Printers	Wage reductions	Unable to adjust	July 1	Aug. 27	18	50
Witt Humphrey Steel Co., Ossining, N. Y.	Strike	Ironworkers	Wages	Adjusted. Agreed to pay standard wage scales in locality.	Aug. 24	Aug. 28	12	4
Ampex (Inc.), New York City	do	Employees	Change in piecework rates	Adjusted. Company agreed to change rates from time to time.	Aug. 29	Aug. 31	30	

Government construction work								
Post-office building, Bend, Oreg.	Controversy	Building workers	Local labor not employed	Pending	Aug. 1		14	40
Veterans' hospital, Aspinwall, Pa.	Strike	Bricklayers	Delay in payment of wages	Adjusted. Men paid off	do	Aug. 20	15	50
Post-office building, Wheaton, Ill.	Controversy	Building workers	Prevailing-wage discussion	Pending	July 28		(1)	------
Post-office building, Lapeer, Mich.	do	Bricklayers	do	Adjusted. Agreed to pay $1.25 per hour, prevailing wage.	July 27	Aug. 4	8	------
Miller Electric Co., contractor, Post-office building, Detroit, Mich.	Threatened strike.	Electricians	Alleged violation of rate agreement.	Adjusted. Agreed to negotiate while work continued. Electricians allowed $1.55 per hour.	July 30	Aug. 1	30	600
Post-office building, Chattanooga, Tenn.	Controversy	Truck drivers	Prevailing-wage discussion	Adjusted. Increased from 25 to 27½ cents per hour.	Aug. 1	Aug. 5	50	100
Post-office building, Knoxville, Tenn.	do	do	do	do	July 8	Aug. 6	50	100
Indian-school building, Santa Fe, N. Mex.	do	Building workers	do	Adjusted. Prevailing wage fixed by Secretary of Labor.	Aug. 8	Aug. 31	50	------
Veterans' hospital, Seattle, Wash.	Strike	do	Jurisdiction of certain building work.	Adjusted. Satisfactorily settled	Aug. 10	Sept. 6	200	------
Post-office building, Glendale, Calif.	Controversy	do	Prevailing-wage discussion	Pending	Aug. 5		(1)	------
Ironworkers, Fort Niagara, N. Y.	do	Carpenters and ironworkers.	Investigation relative soldier labor.	Adjusted. Soldier labor will be used.	do	Aug. 8	8	20
Post-office building, Monte Vista, Colo.	do	Building workers	Prevailing-wage investigation	Adjusted. Rates fixed by Secretary of Labor.	July 9	Sept. 6	10	------
Building, Fort Snelling, Minn.	do	Carpenters	Signing of contract	Adjusted. Contract signed	June 17	July 11	20	30
Post-office building, Louisville, Ky.	do	Painters	Not paying prevailing wage	Adjusted. Will pay prevailing wage, fixed at 90 cents per hour.	Aug. 1	Aug. 9	30	240
Veterans' hospital, Wichita, Kans.	do	Building workers	Hours, local labor, and wages	Pending	Aug. 9		15	60
Army and Navy hospital, Hot Springs, Ark.	do	Laborers and ironworkers.	Laborers doing ironworkers' work	Adjusted. Laborers will not be assigned to ironworkers' work.	July 20	Aug. 5	10	10
Building, Jefferson City, Mo.	do	Building workers	Prevailing wage and 20 per cent cut.	Adjusted. Rates fixed by parties at interest.	Aug. 11	Aug. 24	50	75
Federal-office building, Portland, Oreg.	do	Bricklayers	Prevailing-wage discussion	do	Aug. 13	Aug. 22	25	125
Post-office building, San Angelo, Tex.	do	do	do	Adjusted. Agreed on $1 per hour for bricklayers.	Aug. 15	Aug. 19	15	------
Nurses' home, Hines, Ill.	do	Building workers	Alleged violation of prevailing wage law.	Pending	Aug. 8		25	------
Federal building, Wichita Falls, Tex.	do	Masons	Violation of agreement relative employment of local labor.	Adjusted. Agreed to employ 75 per cent local workmen.	Mar. 1	Aug. 15	10	90
Post-office building, Altoona, Pa.	Strike	Bricklayers	Wages not paid	Adjusted. Satisfactorily settled	Aug. 10	Aug. 17	6	15
Veterans' hospital, Fayetteville, Ark.	Controversy	Ironworkers	Prevailing-wage discussion	Pending	Aug. 17		(1)	------
Federal building, Youngstown, Ohio.	do	Bricklayers	do	do	Aug. 12		25	100
Government Printing Office, Washington, D. C.	do	Bricklayers, carpenters, ironworkers, and laborers.	do	Adjusted. Bricklayers $1.75, carpenters $1.37½, ironworkers $1.65, laborers 40 cents per hour.	Aug. 15	Aug. 18	40	------
Bricklayers, Phoenix, Ariz.	do	Bricklayers	do	Unclassified. Contract completed before commissioner's arrival.	do	Aug. 31	20	------
Post-office building, South Bend, Ind.	do	Painters	do	Adjusted. Allowed 75 cents per hour.	July 1	Aug. 13	20	100

[1] Not reported.

LABOR DISPUTES HANDLED BY THE CONCILIATION SERVICE DURING THE MONTH OF AUGUST, 1932—Continued

Company or industry and location	Nature of controversy	Craftsmen concerned	Cause of dispute	Present status and terms of settlement	Duration		Workers involved	
					Beginning	Ending	Directly	Indirectly
Government construction work—Continued					1932	1932		
Post-office building, Whiting, Ind.	Threatened strike.	Building workers	Union or nonunion workmen	Adjusted. Union men employed. Workers' committee appointed.	Aug. 11	Aug. 13	27	50
Veterans' hospital, Rutland, Mass.	Strike	Bricklayers and plasterers.	Alleged prevailing wage not being paid.	Adjusted. Plasterers increased to $10 per day, prevailing wage.	Aug. 15	Aug. 19	20	------
Barracks, Barksdale Field, La	Controversy	Carpenters	Prevailing-wage discussion	Adjusted. Carpenters' rate fixed at $1 per hour. Rates for other crafts discussed.	Aug. 13	Sept. 12	25	25
Veterans' hospital, Genesco, N. Y.	do	do	do	Pending	Aug. 3	----------	40	------
Post-office building, Findlay, Ohio.	do	do	Receiving 50 cents per hour; alleged prevailing rate 80 cents.	Adjusted. Rate fixed at 70 cents per hour.	Aug. 23	Sept. 7	6	30
Post-office building, Cheraw, S. C.	do	Bricklayers	Alleged prevailing rate not being paid.	Adjusted. (Report not yet received.).	Aug. 24	Sept. 12	12	------
Post-office building, Terre Haute, Ind.	do	Common laborers	Prevailing wage not being paid	Adjusted. Satisfactory settlement.	Aug. 20	Sept. 8	(1)	------
Post-office building, Greensboro, N. C.	do	Electricians	do	Adjusted. Allowed 75 cents per hour; one helper to each mechanic.	June 1	Aug. 24	10	60
Marine hospital, Louisville, Ky.	do	Hod carriers	Prevailing-wage discussion	Pending	Aug. 15	----------	10	40
Post-office building, Rutland, Vt.	do	Bricklayers and plasterers.	do	do	Aug. 28	----------	(1)	------
Federal prison, Milan, Mich.	do	Building workers	do	do	Aug. 18	----------	35	------
Post-office building, Spencer, Iowa.	do	Bricklayers	do	do	Aug. 25	----------	(1)	------
U. S. Indian School, Phoenix, Ariz.	do	Building workers	Prevailing rate for per-diem employees on repair work.	do	Aug. 15	----------	10	------
Sacaton Indian Reservation, Phoenix, Ariz.	do	do	Prevailing wage to apply on new building construction.	do	do	----------	(1)	------
Indian Reservation, Fort Apache, Ariz.	do	do	Prevailing wage for building work	do	do	----------	(1)	------
White River project, Ariz.	do	do	do	do	do	----------	(1)	------
Post-office building, Nyack, N. Y.	do	Structural-iron workers.	do	Adjusted	Aug. 30	Sept. 9	22	15
Prison hospital, Springfield, Mo.	Strike	Plumbers and steam fitters.	Prevailing-wage discussion	Adjusted. Satisfactory settlement.	Aug. 25	Aug. 29	(1)	------
Post-office building, Jackson, Mich.	Controversy	Building workers	Proposal to cut prevailing wages	Pending	Aug. 24	----------	(1)	------
Total							31,118	5,587

[1] Not reported.

LABOR AGREEMENTS, AWARDS AND DECISIONS

Levy on Pressing Machines to Support Unemployment Fund in New York Cloak Industry

THE agreement, dated August 2, 1932, between the American Cloak and Suit Manufacturers' Association and the International Ladies' Garment Workers' Union and the joint board of the Cloak, Skirt, Dress, and Reefer Makers' Union of the international union, provided for submission to the impartial chairman in the industry of the whole question of the use of pressing machines. It was agreed that his decision should be retroactive to the date of the signing of the agreement.

The installation of the pressing machines, their operation, and the wage rate to be paid to the workers operating them were some of the matters which he was to consider.

A hearing was held in which the interested parties were heard, and after consideration of the whole question, the impartial chairman gave his decision as follows:

With respect to pressing machines, I decide as follows:

1. The minimum weekly wage of machine pressers shall be $57.
2. In addition thereto every employer using pressing machines shall pay into the pressers' unemployment fund a sum equal to $8 per week for every pressing machine used during such week at full time.
3. If a pressing machine does not work a full week the employer shall pay in lieu of $8 a sum equal to 14 per cent of the wages earned by each machine presser in his employ during such week. The proceeds of all such payments shall be used for equitable distribution among unemployed pressers, members of the union.
4. The pressers' unemployment fund shall be administered by a board consisting of representatives of locals 35, 48, the joint board, and the International Ladies' Garment Workers' Union, which board shall make its own rules and shall have the power to devise a form of statement or accounting to be filled out by every employer and to accompany his remittance to the board.
5. The above provisions shall enter into effect in the work week beginning on August 22, 1932.

The foregoing decision is to be construed as relating only to a special emergency with reference to this particular machine, that it is not a precedent for unemployment insurance in any form.

The following additional information has been furnished the Bureau of Labor Statistics by F. N. Wolf, chief accountant in the office of the impartial chairman:

The agreement of August 2, 1932, covers 500 firms employing 500 machine pressers. Each machine performs the work of 2½ hand pressers, thereby displacing 750 pressers. Machine pressers are paid $12 a week above the minimum weekly rate of hand pressers.

The firms using pressing machines will pay $8 a week for each machine used into an unemployment fund for union pressers displaced by the use of the machines. It is estimated that the amount raised from this levy on the use of the pressing machines will reach $50,000. This fund will be administered by the union.

Reduction in Wages of Milk-Wagon Drivers, St. Louis, Mo.

IN FEBRUARY, 1932, the dairy companies of St. Louis, Mo., and Milk Wagon Drivers' Union No. 603 agreed to arbitrate a dispute as to a proposed reduction in the minimum weekly wage scale of the

milk-wagon drivers employed by the dairy companies. The arbitrators selected were Ralph F. Fuchs, Frederick H. Kreismann, and Charles A. Houts.

At the time of the arbitration 1,196 men were employed by the 31 companies having agreements with Local No. 603 of the Milk Wagon Drivers' Union. These contracts expired November 1, 1931, at which time the companies proposed a 10 per cent reduction in the minimum wage scale fixed by these contracts. The union declined to accept this reduction.

The companies gave notice in February that beginning March 1, 1932, an 8 per cent reduction in the minimum wage scale would be put into effect.

Negotiations between the parties resulted in an agreement to arbitrate the dispute; pending the decision of the arbitrators, the dairy companies were to withhold 8 per cent of the minimum wages of their employees, as fixed by the expiring contracts, after March 1, 1932, the amount so withheld to be allowed to the companies or to the men in accordance with the findings of the arbitrators.

The dairy companies based their claim for the 8 per cent reduction on a number of considerations, among which were the following: That the retail price of milk had been reduced from 16 cents per quart in 1920 to 10 cents per quart in 1932; that the price paid the farmer for milk had been reduced from $3.25 per hundredweight in 1920 to 99 cents per hundredweight in 1932; that the weekly labor cost to the dairy companies per route had increased from $33.33 in 1920 to $48.18 in 1931; that the report of the United States Bureau of Labor Statistics shows a decline in the cost of living from 1920 to 1932, in St. Louis of 25.1 per cent; that wages and salaries had declined in almost all industries, and that a 10 per cent reduction had been made by agreement between the dairy companies and the Milk Wagon Drivers' Union of Chicago, effective in April, 1932.

The union opposed the reduction, stating that if the 8 per cent reduction were put into effect 975 of their members would earn less than the minimum amount required for the support of a family; that in Chicago, even after the 10 per cent reduction in wages, the retail drivers received $6 more per week than the wages under the expired contract in St. Louis.

The majority of the arbitration board concluded from the evidence submitted that the dairy companies were justified in making an 8 per cent reduction in the weekly wage scale of their drivers, as fixed by the contract expiring November 1, 1931. The commission to be paid the drivers, as provided for in the contract referred to, remains the same. All three arbitrators agreed that the new rate should be in effect from March 1, 1932, to March 1, 1933.

The dissenting opinion of Ralph F. Fuchs, representing the union, was in part as follows:

> I believe it is unwise for arbitrators to reduce the wages of nearly 1,200 employees, thereby lowering their level of well-being and further diminishing the purchasing power of consumers in the community. The present depression can not be ended until the decline in the earnings of farmers and workers is halted. Further decreases should be granted in arbitration proceedings only on the basis of revealed facts showing them to be necessary. No such facts have been advanced here, and general opinions regarding the probable decline in business are not an adequate substitute.

HOUSING

Building Permits in Principal Cities of the United States, August, 1932

AUGUST building shows an increase of 4.5 per cent in indicated expenditures for total building operations as compared with July, according to reports received from 352 identical cities by the Bureau of Labor Statistics. Indicated expenditures for total building operations in August, 1932, were $37,137,073.

Estimated expenditures for new residential buildings increased 20.6 per cent. The estimated cost of new nonresidential buildings decreased 3.7 per cent, and additions, alterations, and repairs increased 10.1 per cent in estimated cost, comparing August with July.

The cost figures in the following tables apply to the cost of the buildings as estimated by the prospective builder on applying for his permit to build. No land costs are included. Only building projects within the corporate limits of the cities enumerated are shown. The States of Illinois, Massachusetts, New Jersey, New York, and Pennsylvania, through their departments of labor, are cooperating with the United States Bureau of Labor Statistics in the collection of these data.

Comparisons, July and August

Table 1 shows the estimated cost of new residential buildings, of new nonresidential buildings, of additions, alterations, and repairs, and of total building operations in 352 identical cities of the United States, by geographic divisions.

TABLE 1.—ESTIMATED COST OF NEW BUILDINGS, OF ADDITIONS, ALTERATIONS, AND REPAIRS, AND OF TOTAL BUILDING CONSTRUCTION IN 352 IDENTICAL CITIES, AS SHOWN BY PERMITS ISSUED IN JULY AND AUGUST, 1932, BY GEOGRAPHIC DIVISIONS

Geographic division	New residential buildings (estimated cost)			New nonresidential buildings (estimated cost)		
	July, 1932	August, 1932	Per cent of change	July, 1932	August, 1932	Per cent of change
New England	$856,507	$861,403	+0.6	$3,701,087	$855,498	−76.9
Middle Atlantic	1,748,823	2,395,568	+37.0	5,328,034	9,443,312	+77.2
East North Central	1,001,374	1,191,126	+18.9	2,540,093	2,178,031	−14.3
West North Central	570,880	872,064	+52.8	2,844,736	802,398	−71.8
South Atlantic	861,842	1,035,010	+20.1	2,923,452	2,908,057	−.5
South Central	578,128	443,407	−23.3	1,325,387	1,547,979	+16.8
Mountain and Pacific	1,209,540	1,437,745	+18.9	1,126,439	1,327,835	+17.9
Total	6,827,094	8,236,323	+20.6	19,789,228	19,063,110	−3.7

TABLE 1.—ESTIMATED COST OF NEW BUILDINGS, OF ADDITIONS, ALTERATIONS, AND REPAIRS, AND OF TOTAL BUILDING CONSTRUCTION IN 352 IDENTICAL CITIES, AS SHOWN BY PERMITS ISSUED IN JULY AND AUGUST, 1932, BY GEOGRAPHIC DIVISIONS—Continued

Geographic division	Additions, alterations, and repairs (estimated cost)			Total construction (estimated cost)			Number of cities
	July, 1932	August, 1932	Per cent of change	July, 1932	August, 1932	Per cent of change	
New England	$1,110,254	$1,046,285	−5.8	$5,667,848	$2,763,186	−51.3	53
Middle Atlantic	2,595,969	3,619,687	+39.4	9,672,826	15,458,567	+59.8	72
East North Central	1,499,123	1,423,600	−5.0	5,040,590	4,792,757	−4.9	93
West North Central	683,518	451,298	−34.0	4,099,134	2,125,760	−48.1	25
South Atlantic	1,100,806	1,279,893	+16.3	4,886,100	5,222,960	+6.9	39
South Central	817,877	856,717	+4.7	2,721,392	2,848,103	+4.7	33
Mountain and Pacific	1,124,810	1,160,160	+3.1	3,460,789	3,925,740	+13.4	37
Total	8,932,357	9,837,640	+10.1	35,548,679	37,137,073	+4.5	352

Increases in indicated expenditures for new residential buildings were shown in all geographic divisions except the South Central. The increases ranged from six-tenths of 1 per cent in the New England States to 52.8 per cent in the West North Central States.

Three of the seven geographic divisions showed increases in new nonresidential buildings.

Increases in indicated expenditures for additions, alterations, and repairs were shown in four of the geographic divisions.

The estimated cost of total construction increased in four of the seven geographic divisions.

Table 2 shows the number of new residential buildings, of new nonresidential buildings, of additions, alterations, and repairs, and of total building operations in 352 identical cities of the United States, by geographic divisions.

TABLE 2.—NUMBER OF NEW BUILDINGS, OF ADDITIONS, ALTERATIONS, AND REPAIRS, AND OF TOTAL BUILDING CONSTRUCTION IN 352 IDENTICAL CITIES, AS SHOWN BY PERMITS ISSUED IN JULY AND AUGUST, 1932, BY GEOGRAPHIC DIVISIONS

Geographic division	New residential buildings		New nonresidential buildings		Additions, alterations, and repairs		Total construction	
	July, 1932	August, 1932	July, 1932	August, 1932	July, 1932	August, 1932	July, 1932	August, 1932
New England	164	186	477	572	1,953	2,152	2,594	2,910
Middle Atlantic	334	440	1,185	1,270	4,038	4,637	5,557	6,347
East North Central	220	282	1,177	1,473	2,311	2,791	3,708	4,546
West North Central	186	246	568	807	945	1,121	1,699	2,174
South Atlantic	215	263	436	565	2,305	2,605	2,956	3,433
South Central	214	224	348	424	1,382	1,711	1,944	2,359
Mountain and Pacific	374	450	830	1,097	2,868	3,438	4,072	4,985
Total	1,707	2,091	5,021	6,208	15,802	18,455	22,530	26,754
Per cent of change		+22.5		+23.6		+16.8		+18.7

Increases were shown in the number of new residential buildings, of new nonresidential buildings, of additions, alterations, and repairs, and of total construction comparing August with July.

Table 3 shows the number of families provided for in the different kinds of housekeeping dwellings, together with the estimated cost

of such dwellings, for which permits were issued in 352 identical cities during July and August, 1932, by geographic divisions.

TABLE 3.—ESTIMATED COST AND NUMBER OF FAMILIES PROVIDED FOR IN THE DIFFERENT KINDS OF HOUSEKEEPING DWELLINGS FOR WHICH PERMITS WERE ISSUED IN 352 IDENTICAL CITIES IN JULY AND AUGUST, 1932, BY GEOGRAPHIC DIVISIONS

Geographic division	1-family dwellings				2-family dwellings			
	Estimated cost		Families provided for		Estimated cost		Families provided for	
	July, 1932	August, 1932	July, 1932	August, 1932	July, 1932	August, 1932	July, 1932	August, 1932
New England	$752,507	$775,903	150	174	$90,000	$77,500	25	22
Middle Atlantic	1,295,664	1,617,216	285	369	263,159	433,352	73	132
East North Central	837,884	1,081,926	207	268	62,490	109,200	15	25
West North Central	552,080	820,564	183	238	18,800	44,000	6	13
South Atlantic	812,392	980,410	195	254	19,000	10,100	11	6
South Central	473,986	404,282	186	211	82,992	30,125	40	23
Mountain and Pacific	945,690	1,202,115	338	404	144,650	171,930	55	73
Total	5,670,203	6,882,416	1,544	1,918	681,091	876,207	225	294
Per cent of change		+21.4		+24.2		+28.6		+30.7

Geographic division	Multifamily dwellings				Total, all kinds of housekeeping dwellings			
	Estimated cost		Families provided for		Estimated cost		Families provided for	
	July, 1932	August, 1932	July, 1932	August, 1932	July, 1932	August, 1932	July, 1932	August, 1932
New England	$14,000	$8,000	4	4	$856,507	$861,403	179	200
Middle Atlantic	190,000	20,000	57	8	1,748,823	2,070,568	415	509
East North Central	101,000	0	42	0	1,001,374	1,191,126	264	293
West North Central	0	7,500	0	4	570,880	872,064	189	255
South Atlantic	30,450	44,500	13	20	861,842	1,035,010	219	280
South Central	21,150	9,000	25	8	578,128	443,407	251	242
Mountain and Pacific	59,200	63,700	31	34	1,149,540	1,437,745	424	511
Total	415,800	152,700	172	78	6,767,094	7,911,323	1,941	2,290
Per cent of change		−63.3		−54.7		+16.9		+18.0

August permits issued showed increases in the number of families provided for and in the estimated cost of both 1-family and 2-family dwellings. There was a decrease in the number of families provided for and in the estimated cost of apartment houses. The total number of families provided for during August increased 18 per cent as compared with July, while indicated expenditures for all classes of dwelling houses increased 16.9 per cent.

Table 4 shows the index number of families provided for, the index numbers of indicated expenditures for new residential buildings, for new nonresidential buildings, for additions, alterations, and repairs, and for total building operations.

TABLE 4.—INDEX NUMBERS OF FAMILIES PROVIDED FOR AND OF THE ESTIMATED COST OF BUILDING OPERATIONS AS SHOWN BY PERMITS ISSUED IN PRINCIPAL CITIES OF THE UNITED STATES

[Monthly average, 1929=100]

Month	Families provided for	Estimated cost of—			
		New residential buildings	New nonresidential buildings	Additions, alterations, and repairs	Total building operations
1930					
August	48.7	43.4	67.2	58.6	54.4
1931					
August	36.6	33.5	63.9	48.3	47.3
1932					
January	14.4	10.2	25.0	25.8	18.2
February	13.0	9.1	16.5	26.7	14.3
March	15.4	10.7	18.1	27.0	15.7
April	13.4	9.7	25.0	32.0	18.8
May	11.3	7.9	39.3	27.3	23.3
June	10.6	7.9	24.6	28.2	17.3
July	8.2	5.6	16.1	22.6	12.0
August	9.7	6.8	15.7	24.9	12.6

There was an increase in the index number of families provided for, in the index numbers of new residential buildings, of additions, alterations, and repairs, and of total building operations comparing August with July. There was, however, a slight decrease in the index number of new nonresidential buildings.

Comparisons of Indicated Expenditures for Public Buildings

TABLE 5 shows the value of contracts awarded for public buildings by the different agencies of the United States Government and by the various State governments during the months of August, 1931, and July and August, 1932.

TABLE 5.—CONTRACTS FOR PUBLIC BUILDINGS LET BY THE UNITED STATES GOVERNMENT AND BY STATE GOVERNMENTS DURING AUGUST, 1931, AND JULY AND AUGUST, 1932, BY GEOGRAPHIC DIVISIONS

Geographic division	Federal			State		
	August, 1931	July, 1932	August,[1] 1932	August, 1931	July, 1932	August,[1] 1932
New England	$198,805	$769,440	$590,128	$554,883	$797,071	$164,421
Middle Atlantic	6,560,324	1,160,179	6,214,288	4,596,483	1,071,507	2,249,526
East North Central	17,417,861	668,273	1,177,466	865,583	276,981	126,613
West North Central	472,100	2,671,151	785,456	467,229	331,764	2,136,267
South Atlantic	1,804,819	2,506,840	1,454,722	534,527	278,811	405,825
South Central	1,742,725	1,048,442	953,943	65,660	866,655	2,656,255
Mountain and Pacific	265,627	1,195,181	773,006	176,160	73,510	598,900
Total	28,462,261	10,019,506	11,949,009	7,260,525	3,696,299	8,337,807

[1] Figures subject to revision.

Contracts awarded for Federal buildings during August, 1932, totaled $11,949,009. This is higher than the value of contracts awarded during July, 1932, but much less than the value of contracts awarded during August, 1931.

The value of contracts awarded for State buildings during August, 1932, was $8,337,807; more than twice the value of July awards and slightly more than the value of awards during August, 1931.

Whenever a Federal or State contract is let for a building in a city having a population of 25,000 or over, the number or cost of such building is included in the tables shown herein.

Comparisons, August, 1932, with August, 1931

TABLE 6 shows the estimated cost of new residential buildings, of new nonresidential buildings, of additions, alterations, and repairs, and of total building operations in 343 identical cities of the United States having a population of 25,000 or over, for the months of August, 1931, and August 1932, by geographic divisions.

TABLE 6.—ESTIMATED COST OF NEW BUILDINGS, OF ADDITIONS, ALTERATIONS, AND REPAIRS, AND OF TOTAL BUILDING CONSTRUCTION IN 343 IDENTICAL CITIES AS SHOWN BY PERMITS ISSUED IN AUGUST, 1931, AND AUGUST, 1932, BY GEOGRAPHIC DIVISIONS

Geographic division	New residential buildings (estimated cost)			New nonresidential buildings (estimated cost)		
	August, 1931	August, 1932	Per cent of change	August, 1931	August, 1932	Per cent of change
New England	$4,861,025	$797,903	−83.6	$3,684,658	$842,103	−77.1
Middle Atlantic	20,810,920	2,360,748	−88.7	22,616,536	9,416,312	−58.4
East North Central	4,878,889	1,191,126	−75.6	27,219,923	2,177,447	−92.0
West North Central	2,575,212	872,064	−66.1	2,705,522	802,398	−70.3
South Atlantic	2,462,580	1,028,819	−58.2	4,179,653	2,895,107	−30.7
South Central	2,421,838	443,407	−81.7	3,714,377	1,547,979	−58.3
Mountain and Pacific	4,761,648	1,411,700	−70.4	4,242,917	1,321,395	−68.9
Total	42,772,112	8,105,767	−81.0	68,363,586	19,002,741	−72.2

Geographic division	Additions, alterations, and repairs (estimated cost)			Total construction (estimated cost)			Number of cities
	August, 1931	August, 1932	Per cent of change	August, 1931	August, 1932	Per cent of change	
New England	$1,005,316	$1,018,698	+1.3	$9,550,999	$2,658,704	−72.2	50
Middle Atlantic	5,852,409	3,606,319	−38.4	49,279,865	15,383,379	−68.8	70
East North Central	3,091,109	1,422,420	−54.0	35,189,921	4,790,993	−86.4	92
West North Central	1,074,307	451,298	−58.0	6,355,041	2,125,760	−66.6	25
South Atlantic	2,037,969	1,272,893	−37.5	8,680,202	5,196,819	−40.1	38
South Central	974,277	856,717	−12.1	7,110,492	2,848,103	−59.9	33
Mountain and Pacific	1,620,933	1,141,525	−29.6	10,625,498	3,874,620	−63.5	35
Total	15,656,320	9,769,870	−37.6	126,792,018	36,878,378	−70.9	343

There was a decrease in indicated expenditures for new residential buildings, for new nonresidential buildings, for additions, alterations, and repairs, and for total buildings operations, comparing August, 1932, with August, 1931.

Table 7 shows the number of new residential buildings, of new nonresidential buildings, of additions, alterations, and repairs, and of total building operations in 343 identical cities having a population of 25,000 or over, for August, 1932, and August, 1931, by geographic divisions.

TABLE 7.—NUMBER OF NEW BUILDINGS, OF ADDITIONS, ALTERATIONS, AND REPAIRS, AND OF TOTAL BUILDING CONSTRUCTION IN 343 IDENTICAL CITIES, AS SHOWN BY PERMITS ISSUED IN AUGUST, 1931, AND AUGUST, 1932, BY GEOGRAPHIC DIVISIONS

Geographic division	New residential buildings		New nonresidential buildings		Additions, alterations, and repairs		Total construction	
	August, 1931	August, 1932	August, 1931	August, 1932	August, 1931	August, 1932	August, 1931	August, 1932
New England	416	174	840	557	2,284	2,111	3,540	2,842
Middle Atlantic	1,217	434	2,121	1,262	4,507	4,606	7,845	6,302
East North Central	797	282	2,474	1,467	3,621	2,783	6,892	4,532
West North Central	569	246	1,074	807	1,426	1,121	3,069	2,174
South Atlantic	412	261	771	561	2,759	2,589	3,942	3,411
South Central	560	224	623	424	1,995	1,711	3,178	2,359
Mountain and Pacific	1,119	442	1,484	1,080	4,349	3,402	6,952	4,924
Total	5,090	2,063	9,387	6,158	20,941	18,323	35,418	26,544
Per cent of change		−59.5		−34.4		−12.5		−25.1

The number of new residential buildings, new nonresidential buildings, additions, alterations, and repairs, and of total building operations decreased in August, 1932, as compared with the same month of the previous year.

Table 8 shows the number of families provided for in the different kinds of housekeeping dwellings, together with the cost of such dwellings, for which permits were issued in 343 identical cities during August, 1931, and August, 1932, by geographic divisions.

TABLE 8.—ESTIMATED COST AND NUMBER OF FAMILIES PROVIDED FOR IN THE DIFFERENT KINDS OF HOUSEKEEPING DWELLINGS FOR WHICH PERMITS WERE ISSUED IN 343 IDENTICAL CITIES IN AUGUST, 1931, AND AUGUST, 1932, BY GEOGRAPHIC DIVISIONS

Geographic division	1-family dwellings				2-family dwellings			
	Estimated cost		Families provided for		Estimated cost		Families provided for	
	August, 1931	August, 1932	August, 1931	August, 1932	August, 1931	August, 1932	August, 1931	August, 1932
New England	$1,836,825	$712,403	340	162	$519,200	$77,500	132	22
Middle Atlantic	6,063,598	1,582,396	992	363	1,205,822	433,352	297	132
East North Central	3,589,639	1,081,926	711	268	504,400	109,200	127	25
West North Central	2,039,762	820,564	531	238	150,950	44,000	51	13
South Atlantic	1,887,180	974,219	389	252	24,700	10,100	13	6
South Central	1,772,061	404,282	489	211	322,282	30,125	115	23
Mountain and Pacific	3,799,614	1,176,070	1,004	396	407,534	171,930	140	73
Total	20,988,679	6,751,860	4,456	1,890	3,134,888	876,207	875	294
Per cent of change		−67.8		−57.6		−72.0		−66.4

TABLE 8.—ESTIMATED COST AND NUMBER OF FAMILIES PROVIDED FOR IN THE DIFFERENT KINDS OF HOUSEKEEPING DWELLINGS FOR WHICH PERMITS WERE ISSUED IN 343 IDENTICAL CITIES IN AUGUST, 1931, AND AUGUST, 1932, BY GEOGRAPHIC DIVISIONS—Continued

Geographic division	Multifamily dwellings				Total, all kinds of housekeeping dwellings			
	Estimated cost		Families provided for		Estimated cost		Families provided for	
	August, 1931	August, 1932	August, 1931	August, 1932	August, 1931	August, 1932	August, 1931	August, 1932
New England	$123,000	$8,000	41	4	$2,479,025	$797,903	513	188
Middle Atlantic	12,411,500	20,000	2,629	8	19,680,920	2,035,748	3,918	503
East North Central	316,850	0	106	0	4,410,889	1,191,126	944	293
West North Central	234,500	7,500	96	4	2,425,212	872,064	678	255
South Atlantic	550,700	44,500	193	20	2,462,580	1,028,819	595	278
South Central	95,900	9,000	48	8	2,190,243	443,407	652	242
Mountain and Pacific	554,500	63,700	282	34	4,761,648	1,411,700	1,426	503
Total	14,286,950	152,700	3,395	78	38,410,517	7,780,767	8,726	2,262
Per cent of change		−98.9		−97.7		−79.7		−74.1

Decreases were shown in both the number of families provided for and the estimated cost of all classes of dwelling houses comparing permits issued in August, 1932, with those issued in August, 1931.

Details by Cities

TABLE 9 shows the number and estimated cost of new residential building, of new nonresidential building, and of total building operation for each of the 352 cities from which reports were received for August, 1932.

No reports were received from New London, Conn.; Bangor, Me.; Worcester, Mass.; Anderson, Ind.; Port Huron, Mich.; University City, Mo.; Pensacola, Fla.; Lynchburg, Va.; Fort Smith, Ark.; Ashland and Newport, Ky.; Meridian, Miss.; Muskogee and Okmulgee Okla.; Brownsville and Galveston, Tex.; and Tacoma, Wash.

Permits were issued for the following important building projects during the month of August, 1932: In Trenton, N. J., for factory building to cost $200,000; in the Borough of Manhattan for a public building to cost $500,000 and for a store building to cost $500,000; Wilmington, Del., for a public school building to cost nearly $400,000; in Washington, D. C., for two institutional buildings to cost nearly $700,000 and for a public school building to cost over $300,000 and in San Francisco for a school building for the University of California to cost over $400,000.

Contracts were awarded by the Supervising Architect of the United States Treasury Department for a post-office building in Lynn, Mass., to cost over $300,000; for a post office in Rochester, N. Y., to cost over $800,000; in Allentown, Pa., for a post office to cost over $300,000, in Philadelphia, Pa., for a post office to cost nearly $4,500,000; in Chicago, Ill., for an appraisers' store building to cost nearly $700,000; in Durham, N. C., for a post office to cost nearly $300,000; and in Lexington, Ky., for a post office to cost nearly $450,000.

TABLE 9.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, AUGUST, 1932

New England States

City and State	New residential buildings	New nonresidential buildings	Total (including repairs)
Connecticut:			
Bridgeport	$39,680	$16,746	$69,826
Bristol	11,700	1,552	16,668
Greenwich	12,000	1,050	23,950
Hartford	11,548	36,159	134,013
Meriden	19,100	4,578	29,788
New Britain	8,300	675	15,599
New Haven	25,000	10,945	54,920
Norwalk	39,000	7,200	67,335
Stamford	4,000	3,670	27,745
Torrington	0	2,520	6,950
Waterbury	10,500	6,300	22,350
West Hartford	19,000	1,645	43,529
Maine:			
Lewiston	3,650	2,200	6,850
Portland	6,500	1,687	42,554
Massachusetts:			
Arlington	32,500	10,950	45,503
Beverly	5,000	3,305	11,557
Boston[1]	134,000	51,270	448,523
Brockton	9,000	2,644	24,033
Brookline	35,800	12,875	75,723
Cambridge	22,500	86,670	180,275
Chelsea	0	3,800	12,290
Chicopee	2,300	2,150	7,150
Everett	4,500	4,420	18,520
Fall River	0	1,995	4,325
Fitchburg	10,600	2,990	17,740
Haverhill	3,200	2,155	26,055
Holyoke	3,500	1,375	8,025
Lawrence	0	81,900	87,053
Lowell	0	1,825	15,272
Massachusetts—Continued.			
Lynn	0	$316,000	$362,922
Malden	$3,900	1,380	14,750
Medford	14,500	5,275	22,555
New Bedford	0	8,500	10,880
Newton	115,150	19,000	148,635
Pittsfield	40,500	1,750	49,575
Quincy	24,900	10,165	48,315
Revere	3,000	1,525	17,540
Salem	15,500	23,650	56,310
Somerville	0	1,800	9,075
Springfield	29,750	33,885	89,035
Taunton	600	986	10,275
Waltham	4,300	9,160	14,310
Watertown	7,000	2,000	16,180
New Hampshire:			
Concord	6,000	900	11,400
Manchester	3,825	1,986	30,428
Rhode Island:			
Central Falls	0	1,100	7,230
Cranston	31,500	8,555	43,030
East Providence	18,300	2,575	30,782
Newport	17,500	2,380	27,080
Pawtucket	6,300	1,930	13,450
Providence	34,000	28,845	164,183
Woonsocket	0	4,100	5,675
Vermont, Burlington	12,000	800	15,450
Total	861,403	855,498	2,763,186

Middle Atlantic States

City and State	New residential buildings	New nonresidential buildings	Total (including repairs)
New Jersey:			
Atlantic City	$4,000	$103,375	$134,195
Bayonne	15,000	0	15,000
Celleville	2,050	1,575	7,600
Bloomfield	17,000	43,300	62,100
Eamden	3,000	2,200	9,679
Clifton	28,500	6,265	38,354
Cast Orange	12,100	1,950	59,000
Elizabeth	0	6,000	22,600
Garfield	13,000	1,000	17,750
Hackensack	10,520	25,200	42,948
Hoboken	0	600	11,978
Irvington	0	3,525	8,940
Jersey City	52,500	16,725	142,475
Kearny	0	10,600	15,600
Montclair	0	2,300	13,379
Newark	33,500	127,260	193,420
New Brunswick	0	0	8,316
Orange	0	950	25,968
Passaic	2,000	1,450	35,463
Paterson	8,300	27,790	75,085
Perth Amboy	0	430	3,475
Plainfield	35,800	21,275	65,137
Trenton	21,200	207,255	244,440
Union City	0	15,200	29,627
West New York	0	5,000	10,600
West Orange	24,300	1,800	32,240
New York:			
Albany	337,500	70,500	455,138
Amsterdam	9,300	1,742	14,042
Auburn	12,800	1,400	16,845
Binghamton	14,300	4,412	41,358
Buffalo	76,300	59,930	207,212
Elmira	5,000	91,598	101,059
New York—Con.			
Jamestown	$10,750	$13,075	$29,720
Kingston	0	29,585	36,995
Lockport	1,500	450	3,572
Mount Vernon	40,500	3,600	55,427
Newburgh	17,000	350	25,200
New Rochelle	26,000	12,375	48,650
New York City—			
The Bronx[1]	253,350	59,700	627,985
Brooklyn[1]	249,350	131,440	1,110,157
Manhattan[1]	0	1,014,900	1,795,935
Queens[1]	299,250	230,172	771,236
Richmond[1]	52,580	8,930	136,600
Niagara Falls	16,600	3,560	44,897
Poughkeepsie	31,300	1,700	33,625
Rochester	39,100	847,404	920,255
Schenectady	14,500	3,235	45,939
Syracuse	39,000	6,470	146,170
Troy	20,600	7,250	30,985
Utica	26,500	14,000	42,600
Watertown	25,000	3,367	31,654
White Plains	15,950	5,250	38,800
Yonkers	99,800	155,350	346,900
Pennsylvania:			
Allentown	2,800	572,882	609,702
Altoona	1,100	2,389	6,499
Bethlehem	60,000	4,000	106,700
Butler	0	250	915
Chester	0	325	3,295
Easton	8,200	68,185	85,623
Erie	34,300	9,245	72,728
Harrisburg	18,500	12,210	50,360
Hazleton	17,738	5,692	32,950
Johnstown	1,800	1,315	8,895
Lancaster	4,000	3,800	15,250

[1] Applications filed.

TABLE 9.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, AUGUST, 1932—Continued

Middle Atlantic States—Continued

City and State	New residential buildings	New nonresidential buildings	Total (including repairs)
Pennsylvania—Continued.			
McKeesport	0	$15,205	$20,639
Nanticoke	$35,900	0	36,900
New Castle	11,500	27,295	39,375
Norristown	0	8,979	18,469
Philadelphia	90,280	5,203,280	5,542,450
Pittsburgh	51,450	27,480	136,442
Reading	0	17,445	34,485
Scranton	$23,800	$7,113	$53,036
Wilkes-Barre	13,100	2,530	41,383
Wilkinsburg	4,500	800	6,525
Williamsport	0	31,157	38,536
York	0	6,965	13,085
Total	2,395,568	9,443,312	15,458,567

East North Central States

City and State	New residential buildings	New nonresidential buildings	Total (including repairs)
Illinois:			
Alton	$8,000	0	$12,335
Aurora	8,100	$2,000	16,995
Belleville	2,500	900	3,400
Berwyn	7,200	1,360	9,885
Bloomington	3,000	0	10,000
Chicago	78,400	963,605	1,227,782
Cicero	0	14,320	14,660
Danville	5,430	650	8,002
Decatur	0	8,015	9,014
East St. Louis	4,500	20,575	28,621
Elgin	13,500	785	20,217
Evanston	25,000	8,000	44,500
Granite City	0	0	200
Joliet	0	7,000	26,500
Maywood	0	0	3,025
Moline	8,500	15,175	29,137
Oak Park	0	200	25,590
Peoria	20,300	4,925	42,250
Quincy	1,300	1,315	15,349
Rockford	3,000	850	8,600
Rock Island	14,500	625	25,130
Springfield	3,300	1,955	35,635
Waukegan	4,000	2,472	8,372
Indiana:			
East Chicago	1,000	6,755	11,265
Elkhart	0	765	4,363
Evansville	16,400	2,500	19,360
Fort Wayne	16,300	28,814	59,156
Gary	3,500	1,350	6,600
Hammond	8,000	3,130	14,119
Indianapolis	89,250	50,515	192,938
Kokomo	0	1,900	2,779
Lafayette	8,000	0	8,030
Marion	1,700	1,525	7,229
Michigan City	0	2,175	4,750
Mishawaka	1,100	100	2,180
Muncie	0	741	4,508
Richmond	3,000	650	5,850
Terre Haute	500	1,114	12,999
Michigan:			
Ann Arbor	34,000	12,715	70,865
Battle Creek	2,500	8,250	33,800
Bay City	7,500	1,405	17,685
Dearborn	14,700	4,310	26,595
Detroit	84,685	158,949	366,105
Flint	1,296	8,029	19,215
Grand Rapids	6,300	28,420	43,080
Hamtramck	0	250	4,415
Highland Park	0	1,250	2,175
Jackson	800	5,231	6,871
Michigan—Contd.			
Kalamazoo	$7,000	$2,662	$16,251
Lansing	0	3,265	24,725
Muskegon	0	3,190	6,219
Pontiac	2,000	4,860	9,260
Royal Oak	0	584	1,764
Saginaw	700	5,900	13,690
Wyandotte	7,000	2,115	9,840
Ohio:			
Akron	39,650	7,405	53,661
Ashtabula	0	195	1,340
Canton	0	16,463	18,108
Cincinnati	168,700	133,650	370,105
Cleveland	130,500	308,325	667,650
Cleveland Heights	16,000	625	18,820
Columbus	12,600	19,350	112,000
Dayton	21,550	27,795	55,841
East Cleveland	5,700	470	8,880
Elyria	1,700	370	2,925
Hamilton	4,900	1,185	7,095
Lakewood	12,000	6,305	21,705
Lima	0	1,505	10,376
Lorain	0	260	770
Mansfield	600	225	2,783
Marion	0	165	465
Massillon	0	543	1,488
Middletown	0	14,950	22,240
Newark	0	0	0
Norwood	0	1,210	1,933
Portsmouth	0	1,775	2,907
Springfield	1,075	2,025	5,370
Steubenville	4,000	1,125	5,825
Toledo	24,200	8,233	49,248
Warren	0	2,400	4,065
Youngstown	10,700	11,440	32,380
Wisconsin:			
Appleton	39,200	3,530	49,690
Eau Claire	17,900	1,600	25,575
Fond du Lac	15,000	1,540	17,040
Green Bay	8,165	2,300	37,699
Kenosha	0	450	4,155
Madison	26,500	4,610	59,965
Milwaukee	81,100	183,656	412,990
Oshkosh	5,725	770	10,007
Racine	6,800	650	11,960
Sheboygan	0	800	16,924
Superior	9,100	595	12,670
West Allis	0	1,300	2,222
Total	1,191,126	2,178,031	4,792,757

West North Central States

City and State	New residential buildings	New nonresidential buildings	Total (including repairs)
Iowa:			
Burlington	0	$2,550	$4,075
Cedar Rapids	$9,850	9,000	48,309
Council Bluffs	0	14,527	24,498
Davenport	17,950	3,765	33,398
Des Moines	30,400	8,315	46,495
Dubuque	0	341,396	351,418
Ottumwa	11,500	5,800	20,950
Iowa—Continued.			
Sioux City	$39,750	$3,905	$45,255
Waterloo	8,000	30,800	45,000
Kansas:			
Hutchinson	0	4,495	7,575
Kansas City	5,100	6,780	15,215
Topeka	500	18,660	23,015
Wichita	7,250	23,980	46,067

TABLE 9.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, AUGUST, 1932—Continued

West North Central States—Continued

City and State	New residential buildings	New nonresidential buildings	Total (including repairs)
Minnesota:			
Duluth	$27,450	$6,575	$51,564
Minneapolis	199,435	97,205	370,016
St. Paul	95,844	82,942	225,392
Missouri:			
Joplin	1,000	0	4,700
Kansas City	40,500	6,600	86,700
Springfield	7,900	8,673	26,801
St. Joseph	1,000	1,700	4,338
St. Louis	221,100	58,495	395,377
Nebraska:			
Lincoln	$19,600	$1,970	$28,757
Omaha	60,350	59,950	138,320
North Dakota:			
Fargo	19,900	1,750	23,150
South Dakota:			
Sioux Falls	47,685	2,565	59,375
Total	872,064	802,398	2,125,760

South Atlantic States

City and State	New residential buildings	New nonresidential buildings	Total (including repairs)
Delaware:			
Wilmington	$55,650	$399,837	$464,954
District of Columbia:			
Washington	494,100	1,576,285	2,405,541
Florida:			
Jacksonville	15,950	6,835	99,250
Miami	19,350	64,840	121,923
Orlando	0	5,340	27,770
St. Petersburg	5,400	3,800	27,000
Tampa	2,000	29,770	42,907
West Palm Beach	6,191	12,950	26,141
Georgia:			
Atlanta	26,650	6,351	89,553
Augusta	1,950	10,731	16,514
Columbus	9,300	25	19,465
Macon	2,050	0	35,182
Savannah	6,500	245	14,703
Maryland:			
Baltimore	120,000	332,000	940,100
Cumberland	3,500	1,150	6,438
Hagerstown	5,500	2,525	9,125
North Carolina:			
Asheville	0	595	6,870
Charlotte	39,000	49,887	104,412
Durham	8,000	286,780	297,105
North Carolina—Continued.			
Greensboro	0	$1,720	$11,702
High Point	$3,850	400	4,825
Raleigh	0	3,480	4,512
Wilmington	500	1,000	4,050
Winston-Salem	8,450	785	20,525
South Carolina:			
Charleston	4,800	700	17,395
Columbia	500	172	4,825
Greenville	0	80	4,040
Spartanburg	0	50	3,465
Virginia:			
Newport News	7,200	2,720	16,763
Norfolk	81,950	13,549	104,349
Petersburg	0	4,640	8,226
Portsmouth	3,600	235	11,765
Richmond	23,600	59,270	108,586
Roanoke	22,819	1,475	25,724
West Virginia:			
Charleston	13,700	9,790	35,963
Clarksburg	17,800	215	22,860
Huntington	1,950	1,615	4,880
Parkersburg	500	1,665	4,055
Wheeling	22,700	14,550	49,497
Total	1,035,010	2,908,057	5,222,960

South Central States

City and State	New residential buildings	New nonresidential buildings	Total (including repairs)
Alabama:			
Birmingham	$4,600	$5,125	$39,713
Mobile	7,400	7,800	23,895
Montgomery	3,810	7,085	54,808
Arkansas:			
Little Rock	2,500	775	16,071
Kentucky:			
Covington	0	92,580	96,150
Lexington	2,600	480,340	511,115
Louisville	18,800	22,555	84,324
Paducah	0	10,800	11,200
Louisiana:			
Baton Rouge	0	3,500	21,822
Monroe	4,500	241,737	247,897
New Orleans	56,340	119,360	365,136
Shreveport	17,147	25,170	65,577
Mississippi:			
Jackson	1,060	500	13,026
Oklahoma:			
Enid	1,000	0	3,480
Oklahoma City	36,000	76,725	128,190
Tulsa	2,800	23,200	34,527
Tennessee:			
Chattanooga	$2,500	$500	$19,677
Johnson City	500	150	750
Knoxville	9,600	864	18,824
Memphis	11,050	22,750	68,120
Nashville	9,900	16,857	80,521
Texas:			
Amarillo	650	33,375	34,690
Austin	33,685	17,139	84,341
Beaumont	2,900	3,625	15,801
Dallas	54,090	107,502	243,920
El Paso	4,650	2,553	88,136
Fort Worth	21,500	22,375	77,960
Houston	92,075	59,315	157,265
Port Arthur	0	1,455	7,829
San Angelo	1,100	4,684	7,034
San Antonio	34,960	59,614	121,568
Waco	6,350	2,555	19,894
Wichita Falls	0	75,414	84,842
Total	443,407	1,547,979	2,848,103

TABLE 9.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, AUGUST, 1932—Continued

Mountain and Pacific States

City and State	New residential buildings	New nonresidential buildings	Total (including repairs)
Arizona:			
Phoenix	$16,500	$435	$22,156
Tucson	11,550	8,035	29,171
California:			
Alameda	4,800	1,025	21,510
Alhambra	0	275	4,250
Bakersfield	5,100	950	10,162
Berkeley	25,600	20,950	68,530
Fresno	9,700	10,375	36,672
Glendale	37,000	12,013	53,113
Huntington Park	10,745	450	17,050
Long Beach	62,450	17,745	112,615
Los Angeles	434,777	122,578	859,118
Oakland	59,530	4,246	98,945
Pasadena	14,050	139,130	193,650
Riverside	18,400	1,295	29,714
Sacramento	42,620	19,510	94,625
San Bernardino	700	7,035	13,436
San Diego	56,300	25,859	126,568
San Francisco	204,110	598,644	1,014,285
San Jose	33,980	4,390	61,445
Santa Ana	5,700	18,275	30,556
Santa Barbara	15,300	5,990	34,070
Santa Monica	19,700	8,325	34,377
California—Contd.			
Stockton	0	$11,760	$23,208
Vallejo	$34,933	1,270	46,666
Colorado:			
Colorado Springs	0	1,150	3,845
Denver	129,800	66,860	267,535
Pueblo	0	855	6,867
Montana:			
Great Falls	6,650	160	7,870
New Mexico:			
Albuquerque	10,500	104,425	134,799
Oregon:			
Portland	62,890	36,265	190,090
Salem	22,890	466	33,274
Utah:			
Ogden	0	5,400	8,500
Salt Lake City	19,450	1,876	40,805
Washington:			
Bellingham	500	12,055	20,306
Everett	5,600	1,380	9,879
Seattle	50,170	31,785	125,750
Spokane	5,750	24,598	40,328
Total	1,437,745	1,327,835	3,925,740

WAGES AND HOURS OF LABOR

Wages and Hours of Labor in the Leather Industry, 1932

THE Bureau of Labor Statistics has completed a study of days and hours worked and earnings of workers in the leather industry in the United States in 1932. The study was limited to tanneries engaged primarily in the manufacture of one or more of such leathers as sole, belting, side upper, kid, patent, or upholstery leather, made from cattle hides, and calf, sheep, and goat skins. A summary of the results is presented in this report; more detailed data will be published later in bulletin form.

Agents of the bureau obtained from the pay rolls and other records of 114 representative tanneries in 15 States the number of days and hours worked in a representative pay-roll period and the amount of earnings made in such period by each of 21,399 wage earners. Except for a few tanneries the wage figures were collected for a pay period in March, April, or May, and, therefore, are representative of conditions in those months. The number of wage earners covered in the study was approximately 43 per cent of the total number engaged in the manufacture of all kinds of leather in the United States, as shown by the 1929 Census of Manufactures.

Table 1 shows average days, full-time and actual hours, and earnings in one week, the per cent of full-time actually worked in the week, and average earnings per hour in 1932 for the industry as a whole and for the wage earners in each of the important occupations in the hide house, beam house, tan house, finishing, sorting and shipping, and maintenance departments in the leather industry; data are also shown for a group of "Other employees" in each department, including the wage earners in a number of occupations each too few in number to warrant occupational tabulation.

The 21,399 wage earners in all occupations combined worked an average of 5.2 days in one week. In arriving at the average per day for these wage earners, each full day or part of a day that an employee did any work in the week was counted as a day. Their full-time hours per week averaged 50.4 and they actually worked an average of 42 hours in the week or 83.3 per cent of full time, thus showing that the hours worked were 16.7 per cent less than full time. They earned an average of 47.1 cents per hour and $19.74 in one week. Had each wage earner worked full time and at the same average per hour as was earned in the hours actually worked, the average full-time earnings per week would have been $23.74 or $4.00 more than was actually earned in the week.

Average earnings per hour of males in the various occupations ranged from 35.1 cents for the measuring-machine operator's helpers in the sorting and shipping department to 66.9 cents for splitting-machine operators in the finishing department, and those of females ranged from 23.2 cents for machine setters-out in the finishing department to 39 cents for laborers and truckers in the sorting and shipping department.

Average actual earnings in one week of males ranged from $14.98 for laborers and truckers in the maintenance department to $29.06 for pumicers in the finishing department, and those of females ranged

from $7.75 for machine setters-out in the finishing department to $16.13 for laborers and truckers in the tan house.

Average hours actually worked in one week by males ranged from 31.8 for buffing-wheel operators to 49.5 for color, fat liquor, and seasoning mixers, and those worked by females ranged from 33.4 for machine setters-out to 50 for hand boarders or grainers. Each of these occupations is in the finishing department.

Hides are received at tanneries in various conditions, known in the industry as "market," i. e., tanned without previous cure; "green salted," preserved by piling down in salt; "dry salted," salted and then allowed to dry; and "flint hides," dried without previous salting. The hides are classified at the tanneries according to weight (as heavy, medium, or light) and are graded by the sorters and counters according to the number and size of scores and cuts made in skinning or dressing animals, holes made by grubs, etc.

Wage earners in the finishing department represented about 65 per cent of those covered by the study. They are divided into three groups—those working on patent leather, those working on sole and belting, and those working on other kinds of leather.

TABLE 1.—AVERAGE HOURS AND EARNINGS IN THE LEATHER INDUSTRY, 1932, BY DEPARTMENT, OCCUPATION, AND SEX

Department and occupation	Sex	Number of establishments	Number of wage earners	Average days on which wage earners worked in 1 week	Average full-time hours per week	Hours actually worked in 1 week		Average earnings per hour	Average full-time earnings per week	Average actual earnings in 1 week
						Average number	Per cent of full time			
Hide house										
Sorters and counters	Male	59	177	5.3	50.0	43.8	87.6	$0.473	$23.65	$20.70
Laborers and truckers	do	29	119	5.3	50.1	44.1	88.0	.410	20.54	18.07
Other employees	do	38	58	5.6	50.2	46.3	92.2	.597	29.97	27.63
Beam house										
Haulers	do	89	671	5.4	50.9	42.8	84.1	.461	23.46	19.72
Splitting-machine operators	do	23	39	5.2	49.7	42.0	84.5	.597	29.67	25.09
Unhairing-machine operators	do	86	287	5.3	51.1	43.0	84.1	.490	25.04	21.07
Fleshing-machine operators	do	105	344	5.3	50.8	42.5	83.7	.492	24.99	20.90
Beamsters or scudders, hand	do	63	432	5.0	51.0	39.5	77.5	.492	25.09	19.46
Beamsters or scudders, machine	do	20	49	5.1	50.5	40.1	79.4	.534	26.97	21.40
Trimmers	do	70	405	5.1	50.6	42.1	83.2	.449	22.72	18.90
Machine helpers	do	21	76	5.0	49.6	41.3	83.3	.431	21.38	17.81
Laborers and truckers	do	64	356	5.1	50.8	42.4	83.5	.424	21.54	17.98
Other employees	do	91	363	5.5	50.2	47.2	94.0	.564	28.31	26.59
Tan house										
Liquor men	do	89	156	5.4	50.7	45.9	90.5	.462	23.42	21.24
Haulers	do	97	753	5.2	50.8	40.7	80.1	.436	22.15	17.76
Laborers and truckers	do	46	184	4.8	51.4	39.5	76.8	.382	19.63	15.11
	Female	1	8	5.6	52.5	49.5	94.3	.326	17.12	16.13
Other employees	Male	84	324	5.3	50.6	44.5	87.9	.577	29.20	25.68
	Female	1	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]
Finishing department, sole and belting										
Bleachers	Male	37	96	5.0	52.7	39.5	75.0	.398	20.97	15.71
Extractors, temperers, and oilers	do	37	237	5.0	52.5	39.9	76.0	.419	22.00	16.73
Wringing and setting-out machine operators	do	38	284	5.1	51.5	38.8	75.3	.432	22.25	16.73
Dry-loft men	do	37	333	5.2	52.0	39.2	75.4	.391	20.33	15.31
Spongers and stuffers	do	33	232	5.2	51.3	39.2	76.4	.390	20.01	15.28
Rolling-machine operators	do	37	534	5.3	51.3	40.8	79.5	.474	24.32	19.37

[1] For less than 3 wage earners in this establishment, data included in total.

TABLE 1.—AVERAGE HOURS AND EARNINGS IN THE LEATHER INDUSTRY, 1932, BY DEPARTMENT, OCCUPATION, AND SEX—Continued

Department and occupation	Sex	Number of establishments	Number of wage earners	Average days on which wage earners worked in 1 week	Average full-time hours per week	Hours actually worked in 1 week		Average earnings per hour	Average full-time earnings per week	Average actual earnings in 1 week
						Average number	Per cent of full time			
Finishing department, patent leather										
Buffing-wheel operators	Male	5	13	4.5	49.8	31.8	63.9	$0.638	$31.77	$20.31
Togglers and tackers	do	8	120	4.9	49.1	35.4	72.1	.572	28.09	20.23
	Female	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Oil and dope mixers	Male	8	13	5.2	49.1	43.3	88.2	.526	25.83	22.78
Daubers	do	8	88	5.2	47.2	40.9	86.7	.653	30.82	26.74
	Female	2	7	5.7	50.5	49.9	98.8	.273	13.79	13.60
Pumicers	Male	8	93	5.5	47.7	43.8	91.8	.663	31.63	29.06
	Female	1	3	6.0	48.0	49.5	103.1	.258	12.38	12.78
Trimmers	Male	5	14	5.6	49.7	41.5	83.5	.490	24.35	20.32
	Female	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Finishing department, other than sole or patent										
Setters-out, machine	Male	70	701	5.1	50.2	41.3	82.3	.449	22.54	18.55
	Female	4	61	4.3	50.6	33.4	66.0	.232	11.74	7.75
Setters-out, hand	Male	23	152	5.1	50.4	38.5	76.4	.456	22.98	17.56
Driers	do	61	324	5.3	50.4	44.1	87.5	.378	19.05	16.67
	Female	20	84	5.3	49.4	43.2	87.4	.266	13.14	11.47
Splitting-machine operators	Male	31	59	5.0	51.0	39.6	77.6	.669	34.12	26.51
Sorters, blue and crust	do	52	163	5.5	50.2	45.7	91.0	.508	25.50	23.23
	Female	5	11	5.9	49.7	48.3	97.2	.248	12.33	11.96
Shaving-machine operators	Male	71	558	5.1	50.0	38.9	77.8	.623	31.15	24.26
Color, fat liquor and seasoning mixers.	do	47	89	5.7	50.2	49.5	98.6	.495	24.85	24.47
Colorers and fat liquorers	do	63	370	5.1	49.7	43.2	86.9	.474	23.56	20.48
	Female	4	14	4.5	49.6	38.7	78.0	.327	16.22	12.65
Oiling-off machine operators	Male	23	43	5.1	50.4	41.0	81.3	.419	21.12	17.16
	Female	9	42	4.6	49.8	36.3	72.9	.288	14.34	10.44
Dampeners or sawdusters	Male	43	119	5.6	50.6	45.4	89.7	.372	18.82	16.88
	Female	3	8	5.5	49.3	44.4	90.1	.257	12.67	11.40
Stakers, machine	Male	72	854	5.1	49.8	41.4	83.1	.560	27.89	23.14
	Female	6	13	4.8	48.5	36.4	75.1	.305	14.79	11.09
Stakers, hand	Male	14	127	4.7	49.1	36.3	73.9	.606	29.75	22.01
Tackers, togglers, and pasters.	do	60	1,111	5.0	49.9	38.2	76.6	.551	27.49	21.05
	Female	4	143	5.0	48.1	34.1	70.9	.341	16.40	11.62
Rolling-machine operators	Male	17	56	4.7	49.2	37.6	76.4	.442	21.75	16.61
	Female	13	44	5.1	49.0	41.4	84.5	.322	15.78	13.34
Buffing-wheel operators	Male	63	603	5.0	50.4	41.3	81.9	.543	27.37	22.43
	Female	4	29	4.8	50.7	42.7	84.2	.235	11.91	10.04
Brushing-machine operators	Male	34	83	5.3	50.3	44.2	87.9	.381	19.16	16.84
	Female	7	13	5.4	49.1	41.9	85.3	.272	13.36	11.39
Trimmers	Male	38	114	5.1	49.5	39.8	80.4	.443	21.93	17.61
	Female	40	238	5.2	50.1	40.1	80.0	.290	14.53	11.61
Finishers or seasoners, machine.	Male	38	224	5.0	49.8	43.9	88.2	.421	20.97	18.46
	Female	30	200	5.1	49.4	40.8	82.6	.291	14.38	11.89
Finishers or seasoners, hand	Male	39	413	5.4	50.3	43.0	85.5	.500	25.15	21.51
	Female	42	875	5.2	50.2	42.8	85.3	.306	15.36	13.09
Glazing-machine operators	Male	59	752	5.1	49.7	40.4	81.3	.603	29.97	24.39
	Female	17	270	4.9	50.6	38.1	75.3	.372	18.82	14.16
Boarders or grainers, hand	Male	31	173	5.2	50.7	39.5	77.9	.517	26.21	20.41
	Female	1	5	6.0	50.0	50.0	100.0	.311	15.54	15.54
Boarders or grainers, machine.	Male	13	42	5.0	48.3	42.0	87.0	.530	25.60	22.27
Embossing or plating press operators.	do	53	280	5.3	50.2	43.6	86.9	.496	24.90	21.63
	Female	7	33	5.0	49.4	40.2	81.4	.275	13.59	11.05
Ironers, hand or machine	Male	26	133	5.0	49.3	40.5	82.2	.465	22.92	18.81
	Female	27	170	5.1	49.8	42.3	84.9	.286	14.24	12.12
Machine helpers	Male	41	188	5.1	50.9	41.2	80.9	.421	21.43	17.35
	Female	7	37	4.8	50.0	40.9	81.8	.261	13.05	10.65
Finishing department, all leathers [2]										
Laborers and truckers	Male	78	562	5.4	50.6	43.9	86.8	.378	19.13	16.63
	Female	7	25	5.7	50.9	45.5	89.4	.279	14.20	12.69
Other employees	Male	108	1,234	5.4	50.6	43.8	86.6	.541	27.37	23.68
	Female	25	117	4.8	50.4	39.2	77.8	.287	14.46	11.25

[1] For less than 3 wage earners in this establishment, data included in total.
[2] These employees were not segregated by kind of leathers.

TABLE 1.—AVERAGE HOURS AND EARNINGS IN THE LEATHER INDUSTRY, 1932, BY DEPARTMENT, OCCUPATION, AND SEX—Continued

Department and occupation	Sex	Number of establishments	Number of wage earners	Average days on which wage earners worked in 1 week	Average full-time hours per week	Hours actually worked in 1 week		Average earnings per hour	Average full-time earnings per week	Average actual earnings in 1 week
						Average number	Per cent of full time			
Sorting and shipping department										
Measuring-machine operators	Male	45	91	5.5	50.0	44.5	89.0	$0.440	$22.00	$19.58
	Female	19	51	5.0	49.6	41.9	84.5	.301	14.93	12.63
Measuring-machine operators' helpers	Male	22	40	5.6	48.7	44.3	91.0	.351	17.09	15.53
	Female	23	46	5.5	49.8	44.1	88.6	.274	13.65	12.10
Sorters	Male	84	364	5.5	49.9	44.6	89.4	.577	28.79	25.73
	Female	8	22	5.5	49.9	45.4	91.0	.305	15.22	13.84
Packers and shippers	Male	96	384	5.5	50.4	44.8	88.9	.427	21.52	19.12
	Female	10	37	5.4	49.7	44.3	89.1	.284	14.11	12.60
Laborers and truckers	Male	36	111	5.2	50.3	42.0	83.5	.382	19.21	16.03
	Female	1	6	5.0	50.0	36.2	72.4	.390	19.50	14.11
Other employees	Male	65	156	5.6	50.2	47.0	93.6	.556	27.91	26.15
	Female	12	26	5.2	49.4	41.8	84.6	.323	15.96	13.51
Maintenance department										
Machine fixers	Male	36	94	5.5	52.3	46.7	89.3	.576	30.12	26.93
Laborers and truckers	do	56	329	5.2	51.4	42.0	81.7	.357	18.35	14.98
	Female	1	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]
Other employees	Male	103	809	5.6	50.6	47.2	93.3	.525	26.57	24.78
All departments										
All occupations	do	114	18,755	5.2	50.4	42.1	83.5	.493	24.85	20.78
	Female	57	2,644	5.1	50.0	40.9	81.8	.303	15.15	12.41
	Male and female	114	21,399	5.2	50.4	42.0	83.3	.471	23.74	19.74

[1] For less than 3 wage earners in this establishment, data included in total.

Hours and Earnings, by Sex and State

TABLE 2 shows for the wage earners of each sex covered in each State in 1932, or group of two States, and for both sexes combined in each State or group of States, average days, hours, and earnings, and the per cent of full time actually worked in one week. In certain cases combination was made of the figures for two States—as, Illinois and Missouri, Kentucky and Tennessee, and Massachusetts and New Hampshire—in order to avoid presenting data for one tannery only, and thus possibly reveal its identity.

The table shows that the 1,224 males of the 5 tanneries covered in Delaware worked an average of 4.7 days in the week for which figures are shown in this report; that their average full-time hours per week were 50.4; that they actually worked an average of 39.7 hours in the week, or 78.8 per cent of their average full-time hours per week; that they earned an average of 46.7 cents per hour and $18.57 in the week; and that had they worked full time during the week at same average per hour as was earned in the hours actually worked in the week they would have earned an average of $23.54 or $4.97 more than was actually earned in the week.

Average earnings per hour for males ranged, by States, from a low of 30.9 cents to a high of 55.9 cents; those for females ranged from 25 to 34.2 cents; and those for both sexes combined ranged from 30.9 to 52.9 cents per hour.

Males in all States combined earned an average of 49.3 cents per hour and $20.78 in one week and their average full-time earnings per week were $24.85. Females earned an average of 30.3 cents per hour and $12.41 in one week and their average full-time earnings per week were $15.15.

TABLE 2.—AVERAGE HOURS AND EARNINGS IN THE LEATHER INDUSTRY, 1932, BY SEX AND STATE

Sex and State	Number of establishments	Number of wage earners	Average days on which wage earners worked in 1 week	Average full-time hours per week	Hours actually worked in 1 week		Average earnings per hour	Average full-time earnings per week	Average actual earnings in 1 week
					Average number	Per cent of full time			
Males									
Delaware	5	1,224	4.7	50.4	39.7	78.8	$0.467	$23.54	$18.57
Illinois and Missouri	9	1,960	5.1	49.9	40.2	80.6	.499	24.90	20.07
Kentucky and Tennessee	3	199	5.5	49.6	41.4	83.5	.382	18.95	15.80
Massachusetts and New Hampshire	26	4,192	5.4	48.6	43.0	88.5	.553	26.88	23.77
Michigan	5	814	5.7	54.0	45.1	83.5	.369	19.93	16.65
New Jersey	10	1,208	5.3	50.5	44.5	88.1	.559	28.23	24.88
New York	11	2,063	5.0	49.8	42.5	85.3	.533	26.54	22.65
North Carolina	5	608	4.1	54.1	29.0	53.6	.309	16.72	8.97
Ohio	5	929	5.4	50.8	45.0	88.6	.501	25.45	22.52
Pennsylvania	23	3,565	5.4	51.0	44.9	88.0	.478	24.38	21.45
West Virginia	4	465	5.3	50.9	33.1	65.0	.372	18.93	12.29
Wisconsin	8	1,528	5.2	52.1	39.9	76.6	.425	22.14	16.96
Total	114	18,755	5.2	50.4	42.1	83.5	.493	24.85	20.78
Females									
Delaware	4	676	4.9	51.1	39.9	78.1	.280	14.31	11.19
Illinois and Missouri	6	394	4.8	49.3	37.5	76.1	.278	13.71	10.42
Massachusetts and New Hampshire	19	640	5.3	48.0	41.6	86.7	.319	15.31	13.28
Michigan	1	76	5.2	54.0	43.8	81.1	.250	13.50	10.92
New Jersey	5	223	5.1	51.7	43.7	84.5	.330	17.06	14.41
New York	5	47	5.4	48.0	44.1	91.9	.342	16.42	15.08
Ohio	1	125	5.6	50.0	45.9	91.8	.305	15.25	14.01
Pennsylvania	9	291	5.0	49.9	41.1	82.4	.342	17.07	14.06
Wisconsin	7	172	5.6	50.8	41.1	80.9	.289	14.68	11.88
Total	57	2,644	5.1	50.0	40.9	81.8	.303	15.15	12.41
Males and females									
Delaware	5	1,900	4.8	50.7	39.8	78.5	.401	20.33	15.94
Illinois and Missouri	9	2,354	5.0	49.8	39.7	79.7	.464	23.11	18.45
Kentucky and Tennessee	3	199	5.5	49.6	41.4	83.5	.382	18.95	15.80
Massachusetts and New Hampshire	26	4,832	5.4	48.6	42.8	88.1	.523	25.42	22.38
Michigan	5	890	5.6	54.0	45.0	83.3	.359	19.39	16.16
New Jersey	10	1,431	5.3	50.7	44.4	87.6	.524	26.57	23.25
New York	11	2,110	5.0	49.8	42.5	85.3	.529	26.34	22.48
North Carolina	5	608	4.1	54.1	29.0	53.6	.309	16.72	8.97
Ohio	5	1,054	5.4	50.7	45.1	89.0	.477	24.18	21.51
Pennsylvania	23	3,856	5.4	50.9	44.6	87.6	.468	23.82	20.89
West Virginia	4	465	5.3	50.9	33.1	65.0	.372	18.93	12.29
Wisconsin	8	1,700	5.3	51.9	40.0	77.1	.411	21.33	16.45
Total	114	21,399	5.2	50.4	42.0	83.3	.471	23.74	19.74

Hours and Earnings in Selected Occupations

TABLE 3 shows average days, hours, and earnings of the wage earners of each sex in each of 10 representative occupations in each State studied. It is believed that these occupations illustrate fairly the conditions in the industry.

The 177 sorters and counters in the hide house earned an average of 47.3 cents per hour and $20.70 in one week. In the various States, average earnings per hour in this occupation ranged from a low of 28.3 cents to a high of 53.0 cents, and average actual earnings in one week ranged from $13.16 to $24.44. Full-time earnings per week for all States averaged $23.65 and ranged, by States, from $14.15 to $26.13.

TABLE 3.—AVERAGE HOURS AND EARNINGS IN 10 OCCUPATIONS IN THE LEATHER INDUSTRY, 1932, BY DEPARTMENT, SEX, AND STATE

Department, occupation, sex, and State	Number of establishments	Number of wage earners	Average days on which wage earners worked in 1 week	Average full-time hours per week	Hours actually worked in 1 week		Average earnings per hour	Average full-time earnings per week	Average actual earnings in 1 week
					Average number	Per cent of full-time			
Hide house									
Sorters and counters, male:									
Delaware	5	18	5.3	50.7	42.8	84.4	$0.344	$17.44	$14.71
Illinois and Missouri	7	21	5.1	49.3	41.7	84.6	.530	26.13	22.09
Kentucky and Tennessee	1	3	6.0	50.0	46.5	93.0	.283	14.15	13.16
Massachusetts and New Hampshire	18	64	5.8	48.7	46.9	96.3	.519	25.28	24.35
Michigan	1	3	6.0	54.0	53.3	98.7	.377	20.36	20.08
New Jersey	6	11	5.0	52.0	45.8	88.1	.464	24.13	21.25
New York	4	5	5.6	50.0	47.1	94.2	.519	25.95	24.44
Ohio	2	8	5.6	50.0	46.8	93.6	.355	17.75	16.59
Pennsylvania	7	16	5.4	50.4	45.9	91.1	.501	25.25	23.01
Wisconsin	8	28	4.4	51.9	34.1	65.7	.441	22.89	15.05
Total	59	177	5.3	50.0	43.8	87.6	.473	23.65	20.70
Beam house									
Fleshing-machine operators, male:									
Delaware	5	31	4.8	49.8	40.3	80.9	.442	22.01	17.80
Illinois and Missouri	8	31	5.2	49.5	39.3	79.4	.501	24.80	19.68
Kentucky and Tennessee	2	5	6.0	49.6	46.0	92.7	.433	21.48	19.91
Massachusetts and New Hampshire	24	79	5.1	48.8	42.5	87.1	.554	27.04	23.54
Michigan	5	11	5.9	54.5	47.6	87.3	.409	22.29	19.46
New Jersey	9	25	6.1	52.5	51.1	97.3	.509	26.72	26.01
New York	11	32	5.4	49.8	44.2	88.8	.564	28.09	24.96
North Carolina	5	11	4.5	54.0	27.5	50.9	.328	17.71	8.99
Ohio	3	13	5.8	50.6	47.3	93.5	.510	25.81	24.09
Pennsylvania	21	74	5.5	52.1	44.4	85.2	.463	24.12	20.58
West Virginia	4	7	5.0	50.6	32.1	63.4	.389	19.68	12.50
Wisconsin	8	25	5.0	52.3	36.7	70.2	.419	21.91	15.37
Total	105	344	5.3	50.8	42.5	83.7	.492	24.99	20.90
Laborers and truckers, male:									
Delaware	2	23	4.7	49.4	39.9	80.8	.434	21.44	17.33
Illinois and Missouri	4	43	5.0	50.0	41.8	83.6	.449	22.45	18.78
Massachusetts and New Hampshire	16	78	5.2	49.5	42.9	86.7	.429	21.24	18.42
Michigan	4	24	5.3	54.0	44.8	83.0	.324	17.50	14.50
New Jersey	1	15	5.6	52.5	48.1	91.6	.431	22.63	20.72
New York	9	46	5.0	49.7	43.1	86.7	.439	21.82	18.89
North Carolina	4	14	3.5	55.0	26.5	48.2	.300	16.50	7.96
Ohio	2	23	5.9	50.0	53.2	106.4	.537	26.85	28.57
Pennsylvania	14	67	5.7	51.3	45.6	88.9	.406	20.83	18.54
West Virginia	4	7	5.7	51.4	37.9	73.7	.333	17.12	12.61
Wisconsin	4	16	2.8	53.1	21.7	40.9	.375	19.91	8.12
Total	64	356	5.1	50.8	42.4	83.5	.424	21.54	17.98
Tan house									
Haulers, male:									
Delaware	4	13	5.5	47.8	43.7	91.4	.348	16.63	15.21
Illinois and Missouri	9	52	5.1	49.5	37.1	74.9	.476	23.56	17.65
Kentucky and Tennessee	3	14	6.0	49.6	43.4	87.5	.382	18.95	16.60
Massachusetts and New Hampshire	18	180	5.3	48.7	42.8	87.9	.470	22.89	20.09
Michigan	5	46	5.8	54.7	42.9	78.4	380	20.79	16.33
New Jersey	6	28	5.2	51.2	42.0	82.0	.443	22.68	18.59
New York	9	78	5.1	51.2	43.2	84.4	.505	25.86	21.84
North Carolina	5	59	3.8	54.1	28.4	52.5	.297	16.07	8.42
Ohio	5	26	5.1	51.4	42.8	83.3	.379	19.48	16.25
Pennsylvania	21	172	5.4	51.2	43.7	85.4	.444	22.73	19.38
West Virginia	4	45	5.3	50.5	35.0	69.3	.368	18.58	12.86
Wisconsin	8	40	4.9	51.9	36.4	70.1	.415	21.54	15.13
Total	97	753	5.2	50.8	40.7	80.1	.436	22.15	17.76

TABLE 3.—AVERAGE HOURS AND EARNINGS IN 10 OCCUPATIONS IN THE LEATHER INDUSTRY, 1932, BY DEPARTMENT, SEX, AND STATE—Continued

Department, occupation, sex, and State	Number of establishments	Number of wage earners	Average days on which wage earners worked in 1 week	Average full time hours per week	Hours actually worked in 1 week: Average number	Hours actually worked in 1 week: Per cent of full-time	Average earnings per hour	Average full-time earnings per week	Average actual earnings in 1 week
Finishing department, sole and belting									
Rolling-machine operators, male:									
Kentucky and Tennessee	3	27	5.7	49.6	39.8	80.2	$0.490	$24.30	$19.52
Massachusetts and New Hampshire	1	9	5.0	50.0	31.3	62.6	.550	27.50	17.24
Michigan	4	40	6.0	54.2	45.6	84.1	.373	20.22	17.01
New York	5	99	4.8	50.5	41.3	81.8	.604	30.50	24.98
North Carolina	5	53	4.2	54.4	33.0	60.7	.329	17.90	10.86
Ohio	2	27	5.7	50.4	43.5	86.3	.475	23.94	20.62
Pennsylvania	13	221	5.6	51.0	44.7	87.6	.472	24.07	21.11
West Virginia	4	58	5.3	50.5	29.9	59.2	.408	20.60	12.22
Total	37	534	5.3	51.3	40.8	79.5	.474	24.32	19.37
Finishing department, other than sole or patent									
Stakers, machine, male:									
Delaware	4	129	4.4	50.8	34.3	67.5	.538	27.33	18.47
Illinois and Missouri	9	60	5.0	49.8	35.4	71.1	.529	26.34	18.76
Massachusetts and New Hampshire	25	259	5.4	48.9	43.9	89.8	.599	29.29	26.27
Michigan	1	12	6.0	54.0	50.7	93.9	.394	21.28	19.97
New Jersey	9	89	5.2	51.9	44.0	84.8	.546	28.34	24.00
New York	7	82	4.9	48.9	43.8	89.6	.570	27.87	24.98
Ohio	1	21	6.0	50.0	55.6	111.2	.588	29.40	32.72
Pennsylvania	8	132	5.0	48.2	40.3	83.6	.596	28.73	24.04
Wisconsin	8	70	5.4	52.2	39.8	76.2	.419	21.87	16.64
Total	72	854	5.1	49.8	41.4	83.1	.560	27.89	23.14
Stakers, machine, female:									
Illinois and Missouri	3	6	4.0	48.3	29.9	61.9	.259	12.51	7.74
Massachusetts and New Hampshire	2	5	5.6	48.0	42.8	89.2	.338	16.22	14.46
Wisconsin	1	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]
Total	6	13	4.8	48.5	36.4	75.1	.305	14.79	11.09
Tackers, togglers and pasters, male:									
Illinois and Missouri	7	221	4.6	50.0	33.1	66.2	.535	26.75	17.71
Massachusetts and New Hampshire	21	381	5.2	48.2	38.5	79.9	.588	28.34	22.63
Michigan	1	53	5.8	54.0	44.8	83.0	.422	22.79	18.90
New Jersey	8	46	4.7	51.4	39.2	76.3	.576	29.61	22.57
New York	7	139	4.9	48.6	41.2	84.8	.579	28.14	23.83
Ohio	4	85	4.5	51.3	37.6	73.3	.606	31.09	22.77
Pennsylvania	4	45	5.3	50.3	44.5	88.5	.594	29.88	26.45
Wisconsin	8	141	5.0	52.2	38.0	72.8	.443	23.12	16.82
Total	60	1,111	5.0	49.9	38.2	76.6	.551	27.49	21.05
Tackers, togglers and pasters, female:									
Illinois and Missouri	2	64	5.0	48.3	33.8	70.0	.292	14.10	9.86
Massachusetts and New Hampshire	1	77	5.0	48.0	34.6	72.1	.381	18.29	13.15
New York	1	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]
Total	4	143	5.0	48.1	34.1	70.9	.341	16.40	11.62
Finishers or seasoners, hand, male:									
Illinois and Missouri	5	89	5.3	50.0	41.9	83.8	.593	29.65	24.88
Massachusetts and New Hampshire	12	88	5.8	48.4	46.5	96.1	.561	27.15	26.10
Michigan	1	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]
New Jersey	3	29	5.3	50.9	44.3	87.0	.586	29.83	25.95
New York	5	38	5.2	49.1	41.0	83.5	.456	22.39	18.69
Ohio	3	65	4.7	51.2	37.8	73.8	.484	24.78	18.27
Pennsylvania	4	29	5.7	51.9	56.4	108.7	.326	16.92	18.39
Wisconsin	6	74	5.5	51.6	39.9	77.3	.394	20.33	15.74
Total	39	413	5.4	50.3	43.0	85.5	.500	25.15	21.51

[1] For less than 3 wage earners in this establishment, data included in total.

TABLE 3.—AVERAGE HOURS AND EARNINGS IN 10 OCCUPATIONS IN THE LEATHER INDUSTRY, 1932, BY DEPARTMENT, SEX, AND STATE—Continued

Department, occupation, sex, and State	Number of establishments	Number of wage earners	Average days on which wage earners worked in 1 week	Average full-time hours per week	Hours actually worked in 1 week		Average earnings per hour	Average full-time earnings per week	Average actual earnings in 1 week
					Average number	Per cent of full-time			
Finishing department, other than soleo r patent—Con.									
Finishers or seasoners, hand, female:									
Delaware	4	221	5.1	51.2	41.3	80.7	$0.287	$14.69	$11.86
Illinois and Missouri	5	71	5.1	50.0	42.1	84.2	.304	15.20	12.77
Massachusetts and New Hampshire	15	204	5.3	48.0	41.9	87.3	.322	15.46	13.48
Michigan	1	32	5.5	54.0	47.6	88.1	.283	15.28	13.46
New Jersey	4	85	5.2	52.3	45.6	87.2	.306	16.00	13.97
New York	1	5	6.0	48.0	49.5	103.1	.332	15.94	16.41
Ohio	1	59	5.5	50.0	45.4	90.8	.315	15.75	14.30
Pennsylvania	7	117	5.0	49.8	42.4	85.1	.327	16.28	13.88
Wisconsin	4	81	5.7	50.6	43.2	85.4	.287	14.52	12.42
Total	42	875	5.2	50.2	42.8	85.3	.306	15.36	13.09
Glazing-machine operators, male:									
Delaware	3	107	4.5	50.8	34.1	67.1	.508	25.81	17.34
Illinois and Missouri	7	28	5.1	50.0	34.9	69.8	.505	25.25	17.62
Massachusetts and New Hampshire	22	182	5.2	49.5	37.5	75.8	.594	29.40	22.29
Michigan	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
New Jersey	5	104	5.1	52.2	44.1	84.5	.604	31.53	26.62
New York	6	27	5.0	49.0	39.5	80.6	.572	28.03	22.57
Ohio	1	58	5.8	50.0	52.0	104.0	.547	27.35	28.44
Pennsylvania	8	209	5.0	47.6	41.0	86.1	.719	34.22	29.49
Wisconsin	6	35	5.8	51.9	46.7	90.0	.439	22.78	20.50
Total	59	752	5.1	49.7	40.4	81.3	.603	29.97	24.39
Glazing-machine operators, female:									
Delaware	4	146	4.9	51.4	39.5	76.8	.327	16.81	12.92
Illinois and Missouri	4	17	4.5	47.1	32.9	69.9	.371	17.47	12.18
Massachusetts and New Hampshire	3	19	4.3	48.0	31.8	66.3	.382	18.34	12.16
New Jersey	2	21	5.7	52.4	49.0	93.5	.426	22.32	20.86
New York	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Pennsylvania	2	64	4.8	50.0	34.5	69.0	.464	23.20	16.01
Wisconsin	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total	17	270	4.9	50.6	38.1	75.3	.372	18.82	14.16
Sorting and shipping department									
Packers and shippers, male:									
Delaware	3	27	5.8	50.8	50.1	98.6	.475	24.13	23.80
Illinois and Missouri	8	27	5.4	49.8	46.4	93.2	.424	21.12	19.69
Kentucky and Tennessee	2	11	6.0	49.6	45.0	90.7	.333	16.52	15.01
Massachusetts and New Hampshire	20	86	5.7	48.3	45.7	94.6	.455	21.98	20.83
Michigan	4	21	5.0	54.0	41.7	77.2	.308	16.63	12.85
New Jersey	9	21	5.5	51.2	45.5	88.9	.506	25.91	23.02
New York	10	51	5.0	50.8	43.8	86.2	.504	25.60	22.06
North Carolina	5	20	4.8	53.6	33.4	62.3	.283	15.17	9.45
Ohio	4	16	5.8	50.5	47.6	94.3	.387	19.54	18.41
Pennsylvania	20	69	5.7	49.7	46.1	92.8	.400	19.88	18.44
West Virginia	4	7	5.9	50.6	37.2	73.5	.402	20.34	14.96
Wisconsin	7	28	5.8	52.1	43.6	83.7	.387	20.16	16.86
Total	96	384	5.5	50.4	44.8	88.9	.427	21.52	19.12
Packers and shippers, female:									
Delaware	2	15	5.5	51.2	44.2	86.3	.262	13.41	11.59
Massachusetts and New Hampshire	5	8	5.5	48.0	44.9	93.5	.287	13.78	12.89
New Jersey	1	3	6.0	46.5	46.5	100.0	.341	15.83	15.83
New York	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Pennsylvania	1	10	4.9	50.0	43.2	86.4	.297	14.85	12.84
Total	10	37	5.4	49.7	44.3	89.1	.284	14.11	12.60

[1] For less than 3 wage earners in this establishment, data included in total.

Hours and Earnings in Sawmills in 1932

A STUDY of wages and hours of labor in the sawmill industry in the United States was made by the Bureau of Labor Statistics during the summer of 1932. A summary of the results of this study is shown in Table 1 in comparison with like figures for each of the other years from 1910 to 1930 in which the bureau has made studies of the industry.

In making the study agents of the bureau collected wage figures covering days, hours, and earnings of each of the 32,130 wage earners of 259 representative sawmills in 21 States for a representative payroll period, except for a few mills, in May, June, and July. Data were also collected for wage earners of logging camps, but wage figures for them are not given in this article. A bulletin will be published later with detailed figures for both sawmills and logging camps.

Trend of Hours and Earnings, 1910 to 1932

BETWEEN 1930 and 1932, average full-time hours per week decreased from 56.5 to 55.8, average earnings per hour decreased from 35.9 cents to 25.6 cents or 29 per cent, and average full-time earnings per week decreased from $20.28 to $14.28. This is shown in Table 1.

The averages for the years from 1910 to 1921 are for wage earners in the important or "selected" occupations in the industry only and are comparable, one year with another, over this period. Those for the years from 1921 to 1932 are for wage earners in all occupations in the industry and are, therefore, comparable one year with another over this period, but are not comparable with the averages for wage earners in the important or selected occupations. Two sets of figures are shown for 1921—the first for 33,115 wage earners in the selected occupations in 279 sawmills, and the second for 45,667 wage earners in all occupations in the industry in the same 279 sawmills.

Average full-time hours per week for the 45,667 wage earners in all occupations in the industry in 1921 were 58 or 0.8 of an hour per week more than the average for the 33,115 in selected occupations only. Average earnings were 2.6 cents more per hour and $1.75 more per week in all occupations than for those in selected occupations.

Index numbers, on the 1913 base, are shown for the purpose of making comparisons of the increases or decreases in hours and earnings from one year to another over the entire period from 1910 to 1932. In order to make the series continuous and comparable, the index numbers for 1921 for selected occupations have been increased or decreased in proportion to the increase or decrease in the averages for all occupations as between 1921 and the specified succeeding years.

The index numbers of average full-time hours per week show that such hours were longer by 0.7 per cent in 1912 and shorter by 10 per cent in 1932 than in 1913, the basic year. They also show that average earnings per hour were 8.6 per cent less in 1915 and 94.6 per cent more in 1919 than in the basic year, 1913, and that earnings per hour and full-time earnings per week were less in 1915 and more in 1919 than in any of the other years in the table.

TABLE 1.—AVERAGE HOURS AND EARNINGS, IN SAWMILLS, WITH INDEX NUMBERS THEREOF, 1910 TO 1932

Year	Number of establishments	Number of wage earners	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1913=100) of—		
						Full-time hours per week	Earnings per hour	Full-time earnings per week
Selected occupations:								
1910	245	23,316	61.3	$0.180	$10.99	100.3	97.3	97.6
1911	299	31,495	61.4	.176	10.76	100.5	95.1	95.6
1912	361	34,884	61.5	.178	10.89	100.7	96.2	96.7
1913	361	34,328	61.1	.185	11.26	100.0	100.0	100.0
1915	348	39,879	61.1	.169	10.30	100.0	91.4	91.5
1919	141	18,022	56.1	.360	20.13	91.8	194.6	178.8
1921 [1]	279	33,115	57.2	.308	17.62	93.6	166.5	156.5
All occupations:								
1921	279	45,667	58.0	.334	19.37			
1923	252	45,068	58.1	.362	21.03	93.8	180.5	169.9
1925	299	61,193	58.1	.357	20.74	93.8	178.0	167.6
1928	319	58,007	56.6	.371	21.00	91.3	184.9	169.7
1930	324	50,951	56.5	.359	20.28	91.2	179.0	163.9
1932	259	32,130	55.8	.256	14.28	90.0	127.6	115.4

[1] 2 sets of averages are shown for 1921 for the industry, 1 for selected occupations and the other for all occupations in the industry. The 1910 to 1921 averages for selected occupations only are comparable one year with another, as are those for all occupations from 1921 to 1932.

Average Hours and Earnings, 1930 and 1932, by Occupations

TABLE 2 shows the average number of days on which wage earners worked in one week, average full-time and actual hours and earnings in one week, average earnings per hour and the per cent of full-time worked in 1930 and 1932 for the wage earners in each of the important occupations in the industry, and for a group designated in the table as "other employees," which includes wage earners in a number of occupations, each too few in number to warrant occupational tabulation.

The figures at the end of the table are for all occupations in the industry and for males only, as no females were found employed in it. They worked an average of 5.2 days in one week in 1930 and 4.8 days in 1932. In arriving at the average days per week, each full day or part of a day on which a wage earner did any work in the week was counted as a day. Their full-time hours per week averaged 56.5 in 1930 and 55.8 in 1932, and they actually worked an average of 48.6 hours in one week in 1930 and 40.1 in 1932. In 1930 the actual working time was 86 per cent of full time, as compared with 71.9 per cent in 1932, thus showing that the hours worked in one week were 14 per cent less than full time in 1930 and 28.1 per cent less in 1932. Earnings per hour averaged 35.9 cents and actual earnings averaged $17.46 in one week in 1930; the amounts were 25.6 cents per hour and $10.25 per week in 1932. Had these employees worked full time in each week and at the same average per hour as was earned in the hours actually worked, their average full-time earnings in one week would have been $20.28 in 1930, as compared with $14.28 in 1932.

Average full-time hours per week were more in 2 and less in 22 occupations in 1932 than in 1930. The average for the group of "other employees" decreased from 57 in 1930 to 56.2 in 1932. Average earnings per hour and average full-time earnings per week were less in 1932 than in 1930 in each of the occupations in the industry.

Average full-time hours per week in the various occupations in the industry ranged in 1930 from 55 for tallymen to 58.4 for yardmen, and in 1932 from 53.1 for power truckers to 58.5 for circular head sawyers. Average earnings per hour ranged, in 1930, from 24.2 cents for yardmen to 88.6 cents for band head sawyers and in 1932 from 15.4 to 65.2 cents for the same occupations.

TABLE 2.—AVERAGE HOURS AND EARNINGS IN SAWMILLS, 1930 AND 1932, BY OCCUPATION

Occupation	Year	Number of establishments	Number of wage earners	Average days on which wage earners worked in 1 week	Average full-time hours per week	Hours actually worked in 1 week		Average earnings per hour	Average full-time earnings per week	Average actual earnings in 1 week
						Average number	Per cent of full time			
Pond men	1930	246	1,338	5.4	56.9	50.8	89.3	$0.344	$19.57	$17.51
	1932	192	708	4.9	55.9	42.1	75.3	.235	13.14	9.91
Yardmen, log	1930	96	337	5.2	58.4	49.8	85.3	.242	14.13	12.05
	1932	69	164	4.6	58.2	42.1	72.3	.154	8.96	6.50
Sawyers, head, band	1930	286	597	5.4	55.9	49.7	88.9	.886	49.53	44.07
	1932	233	414	4.9	55.6	40.0	71.9	.652	36.25	26.12
Sawyers, head, circular	1930	50	59	5.3	58.0	51.0	87.9	.666	38.63	33.96
	1932	35	38	5.0	58.5	45.6	77.9	.430	25.16	19.62
Doggers	1930	271	749	5.1	57.9	48.2	83.2	.306	17.72	14.77
	1932	206	454	4.6	56.9	39.3	69.1	.212	12.06	8.32
Setters	1930	322	684	5.2	56.5	48.8	86.4	.451	25.48	22.03
	1932	255	449	4.9	55.8	40.5	72.6	.319	17.80	12.92
Saw tailers on head saws	1930	323	668	5.3	56.2	49.2	87.5	.336	18.88	16.54
	1932	248	455	4.8	55.7	39.9	71.6	.231	12.87	9.21
Sawyers, gang	1930	72	96	5.5	56.4	52.6	93.3	.506	28.54	26.64
	1932	55	66	5.1	54.7	41.6	76.1	.369	20.18	15.33
Sawyers, resaw	1930	163	307	5.4	55.7	50.7	91.0	.460	25.62	23.36
	1932	105	190	5.1	53.8	40.9	76.0	.341	18.35	13.94
Edgermen	1930	323	804	5.3	56.4	49.4	87.6	.461	26.00	22.78
	1932	256	542	4.9	55.7	40.9	73.4	.324	18.05	13.24
Edger tailers	1930	308	688	5.2	56.5	48.2	85.3	.301	17.01	14.52
	1932	234	478	4.7	55.9	39.3	70.3	.202	11.29	7.92
Transfer men	1930	177	675	5.4	55.2	49.7	90.0	.344	18.99	17.09
	1932	113	386	5.0	54.9	39.9	72.7	.217	11.91	8.66
Trimmer loaders	1930	199	518	5.2	55.8	48.1	86.2	.366	20.42	17.58
	1932	158	313	4.9	54.3	39.2	72.2	.266	14.44	10.43
Trimmer operators	1930	308	518	5.4	55.8	50.1	89.8	.398	22.21	19.93
	1932	252	380	4.9	55.1	40.1	72.8	.283	15.59	11.36
Off bearers, gang or resaw	1930	195	615	5.2	55.8	48.1	86.2	.315	17.58	15.18
	1932	127	328	4.9	54.8	40.2	73.4	.224	12.28	9.01
Graders	1930	307	2,110	5.4	55.2	49.7	90.0	.474	26.16	23.56
	1932	247	1,373	4.9	54.7	40.0	73.1	.331	18.11	13.27
Sorters	1930	284	3,778	5.2	55.3	47.3	85.5	.344	19.02	16.29
	1932	233	2,504	4.8	54.7	38.7	70.7	.242	13.24	9.38
Truckers, hand	[1] 1930	310	3,010	5.2	56.8	49.2	86.6	.307	17.44	15.13
	1932	170	923	4.7	58.3	41.7	71.5	.178	10.38	7.44
Truckers, power	[2] 1932	127	730	5.1	53.1	39.9	75.1	.308	16.35	12.28
Stackers, hand	1930	285	4,663	5.1	57.2	47.2	82.5	.364	20.82	17.18
	1932	245	2,533	4.7	56.8	40.0	70.4	.233	13.23	9.33
Machine feeders, planing mill	1930	252	1,338	5.2	55.5	58.1	86.7	.365	20.26	17.54
	1932	211	890	4.7	55.4	39.9	72.0	.254	14.07	10.13
Sawyers, small saws	1930	270	1,583	5.1	56.8	47.9	84.3	.314	17.84	15.06
	1932	237	1,376	4.5	56.6	38.5	68.0	.211	11.94	8.14
Tallymen	1930	218	743	5.6	55.0	51.3	93.3	.447	24.59	22.95
	1932	162	442	5.1	54.3	43.2	79.6	.315	17.10	13.60
Millwrights	1930	285	678	5.8	55.6	56.5	101.6	.593	32.97	33.55
	1932	216	420	5.7	54.6	51.0	93.4	.425	23.21	21.67
Laborers	1930	324	16,744	5.0	56.6	46.8	82.7	.291	16.47	13.63
	1932	257	11,104	4.6	56.0	38.0	67.9	.205	11.48	7.78
Other employees	1930	319	7,651	5.5	57.0	52.0	91.2	.418	23.83	21.72
	1932	259	4,470	5.2	56.2	44.5	79.2	.325	18.27	14.46
All employees	1930	324	50,951	5.2	56.5	48.6	86.0	.359	20.28	17.46
	1932	259	32,130	4.8	55.8	40.1	71.9	.256	14.28	10.25

[1] Includes truckers, power.

[2] Included in truckers, hand, in 1930.

Average Hours and Earnings in 1930 and 1932, by States

TABLE 3 shows average days, hours, and earnings for the wage earners covered in each State in 1930 and 1932.

Except in one State, average hours actually worked in one week were less in 1932 than in 1930, and average earnings per hour and actual earnings in one week for each State were less in 1932 than in 1930.

Average full-time hours per week in the various States ranged in 1930 from 47.3 to 61.3 and in 1932 from 48 to 60.3 and hours actually worked in one week ranged from 44.5 to 54.4 in 1930 and from 31.4 to 49.5 in 1932. Average earnings per hour ranged from 21.8 to 57.5 cents in 1930 and from 13.3 to 44.4 cents in 1932, and average actual earnings in one week ranged from $10.56 to $27.68 in 1930 and from $5.67 to $16.54 in 1932.

TABLE 3.—AVERAGE HOURS AND EARNINGS IN SAWMILLS, 1930 AND 1932, BY STATES

State	Year	Number of establishments	Number of wage earners	Average days on which wage earners worked in 1 week	Average full-time hours per week	Hours actually worked in 1 week		Average earnings per hour	Average full-time earnings per week	Average actual earnings in 1 week
						Average number	Per cent of full time			
Alabama	1930	28	3,760	4.9	60.8	48.5	79.8	$0.218	$13.25	$10.56
	1932	22	2,224	4.9	60.3	47.7	79.1	.136	8.20	6.49
Arkansas	1930	15	3,569	5.3	58.5	51.6	88.2	.301	17.61	15.51
	1932	13	1,788	4.4	59.3	37.7	63.6	.193	11.44	7.26
California	1930	14	2,650	5.7	53.7	51.1	95.2	.542	29.11	27.68
	1932	12	2,188	5.2	52.2	39.7	76.1	.410	21.40	16.29
Florida	1930	12	2,191	5.0	61.3	50.9	83.0	.236	14.47	12.02
	1932	11	1,502	4.6	59.8	41.4	69.2	.174	10.41	7.22
Georgia	1930	29	2,107	5.2	58.0	49.2	84.8	.218	12.64	10.75
	1932	15	783	4.7	58.9	42.5	72.2	.134	7.89	5.67
Idaho	1930	5	1,205	5.7	48.1	45.6	94.8	.575	27.66	26.21
	1932	5	990	4.9	49.0	38.7	79.0	.427	20.92	16.54
Kentucky	1930	9	500	5.1	57.3	48.7	85.0	.341	19.54	16.57
	1932	6	298	4.9	58.1	41.5	71.4	.268	15.57	11.15
Louisiana	1930	19	4,732	5.1	60.0	50.4	84.0	.287	17.22	14.44
	1932	18	2,986	4.5	59.4	36.6	61.6	.197	11.70	7.20
Maine	1930	11	515	5.5	59.2	54.4	91.9	.352	20.84	19.18
	1932	7	367	5.0	59.0	49.5	83.9	.272	16.05	13.47
Michigan	1930	14	1,858	5.3	58.3	51.2	87.8	.380	22.15	19.46
	1932	10	957	4.6	57.8	37.2	64.4	.296	17.11	10.99
Mississippi	1930	20	4,405	4.7	59.7	45.2	75.7	.282	16.84	12.75
	1932	16	2,441	5.0	59.2	45.9	77.5	.152	9.00	6.99
Montana	1930	5	702	5.5	52.0	47.6	91.5	.504	26.21	23.98
	1932	5	723	4.0	51.9	31.4	60.5	.444	23.04	13.97
North Carolina	1930	32	2,458	5.3	59.0	51.2	86.8	.222	13.10	11.38
	1932	30	1,975	4.6	58.6	42.5	72.5	.160	9.38	6.81
Oregon	1930	15	3,837	5.4	48.6	44.8	92.2	.573	27.85	25.69
	1932	14	2,492	5.3	48.0	39.9	83.1	.412	19.78	16.40
South Carolina	1930	8	1,920	5.1	60.1	50.7	84.4	.225	13.52	11.42
	1932	8	1,322	5.1	60.0	46.7	77.8	.133	7.98	6.21
Tennessee	1930	17	994	4.8	56.8	44.5	78.3	.315	17.89	14.04
	1932	12	498	4.5	58.5	38.8	66.3	.217	12.69	8.42
Texas	1930	11	2,350	4.6	58.7	44.5	75.8	.296	17.38	13.16
	1932	10	1,639	4.2	59.8	36.4	60.9	.221	13.22	8.03
Virginia	1930	9	887	5.1	59.9	50.0	83.5	.259	15.51	12.96
	1932	7	651	4.9	59.4	43.1	72.6	.167	9.92	7.18
Washington	1930	21	6,398	5.5	48.1	45.3	94.2	.549	26.41	24.89
	1932	20	4,682	4.9	48.0	35.0	72.9	.376	18.05	13.14
West Virginia	1930	9	903	5.4	59.0	50.3	85.3	.430	25.37	21.63
	1932	9	822	4.7	59.4	43.1	72.6	.325	19.31	13.99
Wisconsin	1930	17	2,216	5.5	59.1	53.0	89.7	.362	21.39	19.18
	1932	9	802	5.0	58.5	40.3	68.9	.300	17.55	12.08
Total	1930	324	50,951	5.2	56.5	48.6	86.0	.359	20.28	17.46
	1932	259	32,130	4.8	55.8	40.1	71.9	.256	14.28	10.25

Average Hours and Earnings in Selected Occupations, 1932

THE data in Table 4 are limited to the wage earners in six of the representative occupations in the industry; these illustrate fairly the variations of hours and earnings in each of the occupations in the industry in the different States covered in this report.

Average full-time hours of band head sawyers ranged in the various States from 48 to 60 and for all States averaged 55.6. Average hours actually worked in one week ranged from 27 to 51 and for all States averaged 40. Average earnings per hour ranged from 46.0 to 84.5 cents and for all States averaged 65.2 cents. Average full-time earnings per week ranged from $27.14 to $44.39 and for all States averaged $36.25. Average actual earnings per week ranged from $21.42 to $40.70 and for all States averaged $26.12.

TABLE 4.—AVERAGE HOURS AND EARNINGS IN SIX REPRESENTATIVE OCCUPATIONS IN SAWMILLS, 1932, BY STATES

Occupation and State	Number of establishments	Number of wage earners	Average days on which wage earners worked in 1 week	Average full-time hours per week	Hours actually worked in 1 week		Average earnings per hour	Average full-time earnings per week	Average actual earnings in 1 week
					Average number	Per cent of full time			
Sawyers, head, band:									
Alabama	18	23	5.2	57.7	46.6	80.8	$0.574	$33.12	$26.79
Arkansas	12	20	5.2	59.5	42.2	70.9	.547	32.55	23.04
California	12	32	4.9	52.5	37.9	72.2	.749	39.32	28.36
Florida	9	17	4.9	59.7	42.3	70.9	.664	39.64	28.10
Georgia	9	11	4.5	57.6	41.3	71.7	.557	32.08	22.99
Idaho	5	13	5.8	49.4	48.2	97.6	.845	41.74	40.70
Kentucky	6	6	5.3	57.5	48.3	84.0	.602	34.62	29.10
Louisiana	18	36	4.7	58.4	34.2	58.6	.668	39.01	22.81
Maine	5	7	5.0	58.9	48.3	82.0	.550	32.40	26.57
Michigan	10	18	4.9	57.3	40.5	70.7	.613	35.12	24.83
Mississippi	16	33	5.4	58.0	42.2	72.8	.585	33.93	24.71
Montana	5	13	3.4	52.6	27.0	51.3	.844	44.39	22.76
North Carolina	22	26	5.4	59.0	51.0	86.4	.466	27.49	23.74
Oregon	13	32	5.0	48.3	35.7	73.9	.830	40.09	29.67
South Carolina	8	10	5.5	60.0	49.6	82.7	.548	32.88	27.17
Tennessee	11	12	4.4	57.8	37.9	65.6	.611	35.32	23.15
Texas	10	21	4.6	59.4	36.0	60.6	.635	37.72	22.85
Virginia	7	11	5.2	59.0	46.5	78.8	.460	27.14	21.42
Washington	20	48	4.8	48.0	32.3	67.3	.842	40.42	27.21
West Virginia	9	14	4.5	59.6	42.7	71.6	.668	39.81	28.51
Wisconsin	8	11	5.5	58.2	43.6	74.9	.608	35.39	26.51
Total	233	414	4.9	55.6	40.0	71.9	.652	36.25	26.12
Doggers:									
Alabama	19	47	4.7	59.6	44.8	75.2	.131	7.81	5.85
Arkansas	12	36	4.8	59.4	37.7	63.5	.170	10.10	6.42
California	3	5	5.2	50.4	39.2	77.8	.374	18.85	14.68
Florida	10	25	4.0	59.6	36.7	61.6	.147	8.76	5.36
Georgia	13	20	4.4	58.0	39.4	67.9	.098	5.68	3.86
Idaho	3	7	4.0	48.0	32.0	66.7	.489	23.47	15.66
Kentucky	6	11	5.2	57.3	47.5	82.9	.247	14.15	11.76
Louisiana	15	43	4.3	60.3	34.6	57.4	.181	10.91	6.28
Maine	4	7	5.1	59.1	50.7	85.8	.264	15.60	13.40
Michigan	9	17	4.8	57.2	39.8	69.6	.296	16.93	11.75
Mississippi	6	17	4.5	60.0	39.4	65.7	.124	7.44	4.88
Montana	4	12	3.2	52.5	25.0	47.6	.459	24.10	11.44
North Carolina	30	44	4.6	58.6	42.1	71.8	.147	8.61	6.19
Oregon	9	20	5.5	48.2	40.9	84.9	.343	16.53	14.05
South Carolina	7	18	5.3	60.0	47.6	79.3	.128	7.68	6.10
Tennessee	10	15	4.4	57.9	36.9	63.7	.196	11.35	7.22
Texas	4	16	3.8	60.0	38.5	64.2	.212	12.72	8.16
Virginia	7	15	5.1	59.3	45.9	77.4	.161	9.55	7.39
Washington	18	52	5.0	48.0	34.3	71.5	.344	16.51	11.82
West Virginia	8	12	4.4	58.3	40.7	69.8	.329	19.18	13.39
Wisconsin	9	14	4.9	58.2	39.7	68.2	.306	17.81	12.17
Total	206	454	4.6	56.9	39.3	69.1	.212	12.06	8.32

TABLE 4.—AVERAGE HOURS AND EARNINGS IN SIX REPRESENTATIVE OCCUPATIONS IN SAWMILLS, 1932, BY STATES—Continued

Occupation and State	Number of establishments	Number of wage earners	Average days on which wage earners worked in 1 week	Average full-time hours per week	Hours actually worked in 1 week		Average earnings per hour	Average full-time earnings per week	Average actual earnings in 1 week
					Average number	Per cent of full time			
Setters:									
Alabama	22	31	4.9	58.1	45.8	78.8	$0.211	$12.26	$9.67
Arkansas	13	21	5.0	59.5	41.0	68.9	.216	12.85	8.83
California	12	33	5.2	52.7	40.9	77.6	.477	25.14	19.53
Florida	11	20	4.8	59.7	42.5	71.2	.240	14.33	10.20
Georgia	15	15	4.8	59.1	44.8	75.8	.147	8.69	6.57
Idaho	5	15	5.5	49.2	45.0	91.5	.539	26.52	24.28
Kentucky	6	6	5.0	57.5	46.6	81.0	.291	16.73	13.55
Louisiana	18	38	4.6	59.4	34.0	57.2	.272	16.16	9.24
Maine	4	7	5.3	59.1	52.0	88.0	.292	17.26	15.18
Michigan	10	17	5.2	57.2	42.6	74.5	.360	20.59	15.34
Mississippi	16	30	5.6	58.0	47.4	81.7	.242	14.04	11.45
Montana	5	17	3.6	51.9	28.8	55.5	.519	26.94	14.96
North Carolina	29	32	4.8	58.5	43.6	74.5	.197	11.52	8.58
Oregon	14	33	5.2	48.2	38.8	80.5	.509	24.53	19.76
South Carolina	8	11	5.4	60.0	48.5	80.8	.194	11.64	9.42
Tennessee	12	14	4.6	58.1	39.5	68.0	.277	16.09	10.95
Texas	10	22	4.4	60.0	38.2	63.7	.272	16.32	10.38
Virginia	7	10	5.0	58.9	46.1	78.3	.194	11.43	8.95
Washington	20	48	4.8	48.0	32.7	68.1	.429	20.59	14.01
West Virginia	9	16	4.3	56.9	39.2	68.9	.375	21.34	14.68
Wisconsin	9	13	5.3	58.5	41.8	71.5	.362	21.18	15.16
Total	255	449	4.9	55.8	40.5	72.6	.319	17.80	12.92
Saw tailers on head saws:									
Alabama	22	33	4.7	60.0	45.0	75.0	.127	7.62	5.71
Arkansas	12	20	5.1	59.5	42.3	71.1	.158	9.40	6.69
California	12	33	5.2	53.1	40.6	76.5	.351	18.64	14.25
Florida	11	16	4.4	59.6	40.2	67.4	.141	8.40	5.65
Georgia	15	15	4.7	59.1	44.0	74.5	.086	5.08	3.76
Idaho	5	15	5.5	49.2	44.9	91.3	.364	17.91	16.37
Kentucky	6	8	4.8	56.9	40.5	71.2	.223	12.69	9.01
Louisiana	18	37	4.7	59.4	34.0	57.2	.176	10.45	5.97
Maine	2	2	5.0	56.8	47.5	83.6	.332	18.86	15.75
Michigan	10	17	5.1	57.2	42.5	74.3	.286	16.36	12.13
Mississippi	16	28	5.4	59.1	49.9	84.4	.131	7.74	6.54
Montana	5	13	3.3	52.6	26.6	50.6	.394	20.72	10.48
North Carolina	28	31	4.9	58.2	44.4	76.3	.134	7.80	5.95
Oregon	14	41	4.9	48.2	37.2	77.2	.371	17.88	13.83
South Carolina	8	12	5.6	60.0	51.6	86.0	.116	6.99	5.97
Tennessee	10	12	4.2	58.5	35.8	61.2	.181	10.59	6.46
Texas	10	23	4.1	60.0	37.0	61.7	.184	11.04	6.81
Virginia	6	10	4.5	58.3	40.0	68.6	.139	8.10	5.57
Washington	20	60	4.8	48.0	32.0	66.7	.353	16.94	11.32
West Virginia	9	15	4.7	59.7	43.1	72.2	.308	18.39	13.29
Wisconsin	9	14	5.1	58.6	41.1	70.1	.288	16.88	11.85
Total	248	455	4.8	55.7	39.9	71.6	.231	12.87	9.21
Edgermen:									
Alabama	22	39	5.1	58.5	48.5	82.9	.206	12.05	9.98
Arkansas	12	22	4.8	59.5	38.4	64.5	.245	14.58	9.42
California	12	38	5.1	52.6	39.7	75.5	.484	25.46	19.23
Florida	11	25	4.8	59.8	40.6	67.9	.264	15.79	10.70
Georgia	15	15	4.8	59.1	44.0	74.5	.136	8.04	5.97
Idaho	5	18	5.4	49.0	44.6	91.0	.521	25.53	23.21
Kentucky	6	8	5.3	58.1	45.0	77.5	.312	18.13	14.05
Louisiana	18	51	4.8	59.4	36.4	61.3	.254	15.09	9.24
Maine	5	6	5.2	58.8	50.8	86.4	.354	20.29	17.53
Michigan	10	18	5.2	56.7	42.4	74.8	.346	19.62	14.67
Mississippi	16	44	5.3	59.1	49.9	84.4	.215	12.71	10.71
Montana	5	16	3.3	52.5	26.2	49.9	.514	26.99	13.46
North Carolina	30	32	4.7	58.3	42.5	72.9	.189	11.02	8.01
Oregon	14	41	5.4	48.2	40.5	84.0	.540	26.03	21.85
South Carolina	8	16	5.7	60.0	54.0	90.0	.197	11.82	10.65
Tennessee	12	13	4.7	58.0	39.5	68.1	.263	15.25	10.39
Texas	10	23	4.9	60.0	42.9	71.5	.269	16.14	11.53
Virginia	7	10	5.1	58.9	56.1	78.3	.179	10.54	8.27
Washington	20	76	4.7	48.0	31.3	65.2	.477	22.90	14.91
West Virginia	9	15	4.5	59.7	41.4	69.3	.402	24.00	16.63
Wisconsin	9	16	5.3	58.4	43.3	74.1	.358	20.91	15.50
Total	256	542	4.9	55.7	40.9	73.4	.324	18.05	13.24

TABLE 4.—AVERAGE HOURS AND EARNINGS IN SIX REPRESENTATIVE OCCUPATIONS IN SAWMILLS, 1932, BY STATES—Continued

Occupation and State	Number of establishments	Number of wage earners	Average days on which wage earners worked in 1 week	Average full-time hours per week	Hours actually worked in 1 week		Average earnings per hour	Average full-time earnings per week	Average actual earnings in 1 week
					Average number	Per cent of full time			
Laborers:									
Alabama	22	807	4.7	60.6	45.7	75.4	$0.106	$6.42	$4.86
Arkansas	13	619	4.1	59.4	34.6	58.2	.151	8.97	5.25
California	12	740	5.0	52.1	37.9	72.7	.356	18.55	13.49
Florida	11	566	4.4	59.9	40.3	67.3	.131	7.85	5.26
Georgia	15	273	4.4	58.6	39.9	68.1	.094	5.51	3.76
Idaho	5	330	4.6	49.0	35.9	73.3	.364	17.84	13.08
Kentucky	6	76	4.6	58.4	37.3	63.9	.208	12.15	7.77
Louisiana	18	1,007	4.3	59.3	35.5	59.9	.148	8.78	5.25
Maine	6	83	5.1	59.3	50.5	85.2	.207	12.28	10.43
Michigan	10	339	4.0	58.4	31.8	54.5	.247	14.42	7.85
Mississippi	16	868	4.7	59.3	42.0	70.8	.114	6.76	4.77
Montana	5	239	3.9	51.3	30.6	59.6	.391	20.06	11.99
North Carolina	30	723	4.3	58.7	39.6	67.5	.117	6.87	4.65
Oregon	14	871	5.1	47.9	38.1	79.5	.346	16.57	13.20
South Carolina	8	549	4.9	60.0	45.1	75.2	.093	5.58	4.18
Tennessee	11	129	4.2	59.1	36.1	61.1	.161	9.52	5.83
Texas	10	621	3.9	59.7	33.0	55.3	.178	10.63	5.88
Virginia	7	203	4.6	59.6	41.9	70.3	.132	7.87	5.53
Washington	20	1,534	4.8	48.0	34.4	71.7	.317	15.22	10.92
West Virginia	9	239	4.3	59.7	38.3	64.2	.263	15.70	10.08
Wisconsin	9	288	4.7	58.3	36.5	62.6	.257	14.98	9.37
Total	257	11,104	4.6	56.0	38.0	67.9	.205	11.48	7.78

Entrance Wage Rates of Common Labor, July 1, 1932

DATA are presented herewith showing the entrance rates paid to adult male common labor, compiled from reports received from establishments in 13 industries which on July 1, 1932, had 142,938 laborers to whom they were paying the entrance rate. Similar data have been collected by the Bureau of Labor Statistics each year since 1926; the surveys, however, have not been confined to identical establishments over this 7-year interval but have been expanded periodically to secure a more representative coverage in each of the 13 industries surveyed.

The term "common labor" has many interpretations in various industries and even in different localities or plants in the same industry. Also, the rates of pay are increased by some employers after a stated length of service or a certain degree of fitness for the job has been developed. These various interpretations and changes in rates of pay complicate the publication of strictly comparable data concerning common labor. Therefore, to present data which will reflect the changes in common labor wage rates from time to time, the bureau has confined its surveys to the rates paid to adult male common labor when first hired and has interpreted the term "common labor" to mean workers having no specific productive jobs or occupations, who perform physical or manual labor of general character requiring little skill or training.

The 13 industries included in the 1932 survey are industries in which large numbers of common laborers are employed. With the exception of general contracting, the information concerning common labor rates in the remaining 12 industries has been secured from establishments which also furnish monthly volume of employment data to the bureau.

In some cases two rates have been reported by an establishment—for example, one for the 10-hour day and another for the 8-hour day, or one for white laborers and one for colored or Mexican workers. In the following tabulations, however, these distinctions have not been maintained. It is apparent that the lowest rates are shown in those geographic divisions where there are large numbers of colored or Mexican workers, while the highest rates are reported in those localities where the 8-hour day is more or less prevalent.

The number of common laborers receiving the entrance rate on July 1, 1932, in the reporting establishments in the 13 industries surveyed follows:

Automobiles	13,776
Brick, tile, and terra cotta	4,677
Cement	1,099
Electrical machinery, apparatus, and supplies	2,477
Foundry and machine-shop products	9,451
Iron and steel	11,889
Leather	2,798
Lumber (sawmills)	14,068
Paper and pulp	13,800
Petroleum refining	4,082
Slaughtering and meat packing	10,962
Public utilities	20,868
General contracting	32,991
Total	142,938

The following tabulation shows the distribution of these laborers according to the geographic divisions in which the reporting plants or operations are located:

New England	9,048
Middle Atlantic	27,096
East North Central	44,683
West North Central	18,253
South Atlantic	10,837
East South Central	4,505
West South Central	10,258
Mountain	3,597
Pacific	14,661
Total	142,938

The average entrance rate per hour on July 1, 1932, in the combined 13 industries was 38.1 cents.[1]

The highest hourly entrance rate, $1, was reported in the general contracting industry in the Middle Atlantic States and the lowest hourly entrance rate, 5 cents, was reported in the lumber (sawmill) industry in the East South Central division.

With the exception of the automobile industry, the average hourly entrance rate on July 1, 1932, in each of the 13 industries surveyed, was lower than the rate reported on July 1, 1931. In the automobile industry the increase was due to the greater number of laborers reported in July, 1932, at the entrance rates in a number of higher-rate plants. This industry reported the highest average hourly entrance rate of the 13 industries surveyed, 62 cents, while the lowest average entrance rate per hour (21.5 cents) was reported in the lumber (sawmill) industry.

[1] Computed by multiplying the common labor entrance wage rate per hour in each plant by the number of common laborers working at such rate, and dividing the combined aggregate for all plants by the total of such common laborers.

The petroleum refining and public utilities industries reported average hourly entrance rates of 42.1 cents and 41.5 cents, respectively, and the general contracting and electrical machinery industries reported average hourly entrance rates of slightly less than 40 cents. The average hourly entrance rates in the remaining groups ranged from 30.6 cents to 35.6 cents, with the exception of the brick industry, which reported an average of 28.9 cents.

Four of the nine geographic divisions reported average entrance rates of more than 40 cents per hour, the East North Central reporting the highest average rate of 45 cents per hour. The lowest average rate of the nine geographic divisions, 21 cents per hour, was reported in the East South Central division.

Table 1 shows the weighted average entrance rates on July 1 of each of the years since 1926 for all industries combined and for all industries, omitting general contracting.

TABLE 1.—WEIGHTED AVERAGE ENTRANCE RATES FOR COMMON LABOR, JULY 1 OF EACH YEAR, 1926 TO 1932

July 1—	Weighted average entrance rate	
	All industries combined	All industries except general contracting
	Cents	*Cents*
1926	42.8	40.9
1927	42.6	40.4
1928	44.9	44.1
1929	43.7	42.1
1930	43.1	41.6
1931	41.2	40.7
1932	38.1	37.6

Table 2 shows, for each industry included, the high, low, and average common-labor entrance rates per hour on July 1, 1932, in each geographic division and in the United States as a whole.

TABLE 2.—HOURLY ENTRANCE WAGE RATES FOR COMMON LABOR, JULY 1, 1932

[The rates on which this table is based are entrance rates paid for adult male common labor]

Industry	United States	Geographic division [1]								
		New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
Automobiles:	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Low	30.0	30.0	30.0	30.0	36.0	-------	75.0	75.0	-------	45.0
High	75.0	45.0	75.0	75.0	75.0	-------	75.0	75.0	-------	55.0
Average	62.0	38.1	62.5	62.0	61.7	-------	75.0	75.0	-------	52.2
Brick, tile, and terra cotta:										
Low	6.0	28.0	22.0	15.0	20.0	6.0	8.0	12.5	23.5	30.0
High	60.0	45.0	44.0	60.0	34.0	40.0	26.5	22.3	45.0	45.0
Average	28.9	35.8	31.6	32.3	26.5	17.8	17.2	15.5	38.4	36.0

[1] *New England:* Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont. *Middle Atlantic:* New Jersey, New York, Pennsylvania. *East North Central:* Illinois, Indiana, Michigan, Ohio, Wisconsin. *West North Central:* Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota. *South Atlantic:* Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia. *East South Central:* Alabama, Kentucky, Mississippi, Tennessee. *West South Central:* Arkansas, Louisiana, Oklahoma, Texas. *Mountain:* Arizona, Colorado, Idaho, Montana, New Mexico, Nevada, Utah, Wyoming. *Pacific:* California, Oregon, Washington.

TABLE 2.—HOURLY ENTRANCE WAGE RATES FOR COMMON LABOR, JULY 1, 1932—Con.

Industry	United States	Geographic division								
		New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
Cement:	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Low	20.0	.....	32.0	24.0	28.0	.....	20.0	22.5	.....	36.0
High	40.0	.....	35.0	33.5	33.0	.....	33.0	26.0	.....	40.0
Average	30.6	.....	33.5	28.1	30.1	.....	23.2	24.4	.....	38.6
Electrical machinery, apparatus, and supplies:										
Low	26.0	30.0	32.0	30.0	26.0	35.0	.....	.....	.....	.....
High	50.0	45.0	50.0	46.0	31.0	38.0	.....	.....	.....	.....
Average	39.6	38.1	38.3	41.8	28.2	37.0	.....	.....	.....	.....
Foundry and machine-shop products:										
Low	15.0	20.0	17.9	18.0	25.0	15.0	15.0	17.5	35.0	32.0
High	55.0	50.0	54.0	55.0	50.0	40.0	35.0	36.0	55.0	50.0
Average	34.8	36.1	36.9	35.3	35.4	25.0	23.0	28.5	43.0	43.9
Iron and steel:										
Low	15.5	30.0	19.0	25.0	25.0	15.5	16.0	.....	37.0	27.0
High	45.0	40.0	41.0	45.0	33.0	33.0	23.0	.....	37.0	35.0
Average	31.8	32.4	31.2	33.2	30.0	30.1	24.3	.....	37.0	32.4
Leather:										
Low	15.0	30.0	30.0	24.0	20.0	15.0	28.5	.....	.....	31.3
High	55.0	50.0	45.8	55.0	20.0	35.0	28.5	.....	.....	52.0
Average	32.9	38.4	38.8	32.4	20.0	23.4	28.5	.....	.....	42.8
Lumber (sawmills):										
Low	5.0	24.0	12.5	20.0	12.5	6.5	5.0	7.5	16.5	18.8
High	62.5	36.0	30.0	62.5	30.0	31.0	25.0	25.0	37.0	40.0
Average	21.5	25.8	25.9	28.0	25.0	14.6	14.3	15.1	32.0	30.1
Paper and pulp:										
Low	12.5	25.5	25.0	20.0	25.0	16.0	12.5	18.0	.....	25.0
High	50.0	50.0	50.0	45.0	38.0	40.0	29.0	22.5	.....	50.0
Average	35.6	41.4	35.0	35.5	33.3	25.5	19.1	20.4	.....	37.5
Petroleum refining:										
Low	22.5	.....	36.0	35.0	32.5	29.0	.....	22.5	40.0	53.9
High	62.0	.....	56.0	48.0	45.0	50.0	.....	48.0	54.0	62.0
Average	42.1	.....	46.5	40.9	36.9	40.0	.....	35.4	51.1	55.2
Slaughtering and meat packing:										
Low	27.0	34.0	32.5	27.0	29.0	35.0	.....	27.0	31.5	31.0
High	40.0	34.0	40.0	40.0	40.0	35.0	.....	33.0	40.0	40.0
Average	34.6	34.0	35.9	36.3	33.7	35.0	.....	29.9	33.7	34.5
Public utilities: [2]										
Low	15.0	29.0	25.0	20.0	20.0	15.0	15.0	15.0	25.0	27.0
High	75.0	58.0	65.0	75.0	55.0	50.0	40.0	49.0	65.6	60.0
Average	41.5	47.2	45.9	45.5	39.5	30.8	27.9	27.6	42.9	44.3
General contracting: [3]										
Low	7.5	25.0	25.0	20.0	15.0	10.0	15.0	7.5	20.0	30.0
High	100.0	80.0	100.0	90.0	87.5	50.0	37.5	40.0	62.5	75.0
Average	39.9	39.7	46.6	45.1	36.8	23.0	22.7	25.6	44.8	48.2
Total—										
Low	5.0	20.0	12.5	15.0	12.5	6.0	5.0	7.5	16.5	18.8
High	100.0	80.0	100.0	90.0	87.5	50.0	75.0	75.0	65.6	75.0
Average	38.1	40.4	40.4	45.0	35.8	23.4	21.0	23.7	39.3	40.2

[2] Includes street railways, gas works, waterworks, and electric power and light plants.
[3] Includes building, highway, public works, and railroad construction.

Summary of Wage Surveys of Bureau of Labor Statistics, 1926 to 1932

THE Bureau of Labor Statistics has for a number of years collected and published data concerning hours and earnings for the wage earners in many of the major manufacturing industries in the United States. Some of the industries have been covered in the even years and some in the odd years. With the exception of the leather industry, those industries that were covered in 1932 were also studied in 1930.

The bureau has also, at irregular intervals or in one year only, made studies of other industries than those covered every two years. In 1931, wage data were collected for the manufacture of silk and rayon goods, filling stations, motor-vehicle repair garages, air transportation, and bread and cake bakeries. The tanning of leather was covered in 1932.

The detailed results of these studies have been published in various issues of the Monthly Labor Review and in bulletins of the bureau. For convenience of reference, summaries of the more recent of these reports are here presented.

Table 1 shows the average hours and earnings, by sex and year, for each of the industries for which wage studies were completed in the year 1931 and in the first part of 1932.

TABLE 1.—AVERAGE HOURS AND EARNINGS IN SPECIFIED INDUSTRIES AND YEARS

Industry	Year	Average full-time hours per week			Average earnings per hour			Average full-time earnings per week		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Motor vehicles	1930	48.7	50.6	48.8	$0.733	$0.436	$0.724	$35.70	$22.06	$35.33
Coal, anthracite	1931	(1)	------	(1)	[2].824	-------	[2].824	(1)	-------	(1)
Coal, bituminous	1931	(1)	------	(1)	[2].619	-------	[2].619	(1)	-------	(1)
Silk and rayon goods	1931	51.5	50.0	50.7	.485	.335	.406	24.98	16.75	20.58
Foundries	1931	50.3	48.7	50.3	.601	.422	.600	30.23	20.55	30.18
Machine shops	1931	49.8	49.2	49.8	.637	.408	.634	31.72	20.07	31.57
Furniture	1931	51.9	49 8	51.8	.416	.314	.411	21.59	15.64	21.29
Bakeries, bread	1931	55.0	50.1	54.9	.553	.298	.548	30.42	14.93	30.09
Bakeries, cake	1931	51.8	50.1	51.0	.486	.275	.399	25.17	13.78	20.35
Metalliferous mining	1931	51.6	------	51.6	.559	-------	.559	28.84	-------	28.84
Slaughtering and meat packing	1931	49.2	48.9	49.2	.470	.321	.449	23.12	15.70	22.09
Filling stations	1931	60.0	------	60.0	.393	-------	.393	23.58	-------	23.58
Motor-vehicle repair garages	1931	53.4	------	53.4	.579	-------	.579	30.92	-------	30.92
Iron and steel	1931	52.4	------	52.4	.663	-------	.663	34.58	-------	34.58
Air transportation:										
Ground personnel	1931	48.5	48.0	48.5	.645	.497	.640	31.26	23.85	31.05
Pilots	1931	[3]110.0	------	[3]110.0	[4] 7.084	-------	[4] 7.084	[5] 779.19	-------	[5]779.19
Copilots	1931	[3]170.0	------	[3]170.0	[6] 1.341	-------	[6] 1.341	(1)	-------	(1)
Boots and shoes	1932	48.9	48.9	48.9	.493	.308	.412	24.11	15.06	20.15
Hosiery	1932	52.2	51.7	51.9	.494	.292	.376	25.79	15.10	19.51
Underwear	1932	51.1	50.6	50.7	.408	.260	.292	20.85	13.16	14.80
Cotton goods	1932	53.7	53.0	53.4	.284	.234	.266	15.25	12.40	14.20
Dyeing and finishing of textiles	1932	51.4	51.2	51.3	.418	.291	.400	21.49	14.90	20.52
Woolen and worsted goods	1932	50.6	50.0	50.3	.447	.327	.394	22.62	16.35	19.82
Leather	1932	50.4	50.0	50.4	.493	.303	.471	24.85	15.15	23.74
Lumber	1932	55.8	------	55.8	.256	-------	.256	14.28	-------	14.28
Various trades (union scales)	1932	42.9	------	42.9	1.111	-------	1.111	46.74	-------	46.74

[1] Not reported.
[2] Actual hours worked, exclusive of lunch time.
[3] Actual flight hours in 1 month.
[4] Per hour of actual flight regardless of hours on duty.
[5] Average full-time earnings per month.
[6] Per hour on duty regardless of hours of actual flight.

Average hourly earnings are presented in Table 2 for each industry for which studies have been made in more than one year between 1926 and 1932. This table has been compiled for the purpose of showing comparative figures over the period 1926 to 1932, in so far as the bureau's surveys permit.

TABLE 2.—AVERAGE HOURLY EARNINGS IN SPECIFIED INDUSTRIES, 1926 TO 1932, BY SEX

Industry and sex	Earnings per hour, by year						
	1926	1927	1928	1929	1930	1931	1932
Boots and shoes:							
Males	$0.622		$0.625		$0.604		$0.493
Females	.401		.397		.382		.308
Males and females	.528		.530		.510		.412
Hosiery:							
Males	.675		.724		.707		.494
Females	.358		.360		.366		.292
Males and females	.472		.488		.497		.376
Underwear:							
Males	.477		.453		.457		.408
Females	.352		.329		.330		.260
Males and females	.378		.354		.357		.292
Cotton goods:							
Males	.347		.345		.346		.284
Females	.301		.296		.293		.234
Males and females	.328		.324		.325		.266
Dyeing and finishing of textiles:							
Males					.473		.418
Females					.335		.291
Males and females					.452		.400
Lumber, males	[1] .357		.371		.359		.256
Woolen and worsted goods: [2]							
Males	.545		.568		.532		
Females	.418		.438		.403		
Males and females	.491		.514		.473		
Woolen and worsted goods: [3]							
Males					.516		.447
Females					.392		.327
Males and females					.460		.394
Men's clothing:							
Males	.937		.924		.885		
Females	.548		.534		.504		
Males and females	.750		.731		.701		
Slaughtering and meat packing:							
Males		$0.520		$0.525		$0.470	
Females		.364		.369		.321	
Males and females		.501		.504		.449	
Furniture:							
Males				.499		.416	
Females				.345		.314	
Males and females				.490		.411	
Iron and steel, males	.637			.674		.663	
Motor vehicles:							
Males	[1] .729		.756		.733		
Females	[1] .467		.487		.436		
Males and females	[1] .723		.750		.724		
Foundries:							
Males		.626		.625		.601	
Females		.459		.451		.422	
Males and females		.624		.624		.600	
Machine shops:							
Males		.629		.641		.637	
Females		.403		.399		.408	
Males and females		.625		.638		.634	
Coal, bituminous:							
Miners and loaders, males	[4] .817			[4] .687		[4] .599	
Employees other than miners and loaders, males	.664			.605		.595	
Coal, anthracite:							
Inside work, males	[5] .965					.886	
Outside work, males	[5] .598					.612	
Metalliferous mining, males	[5] .559					.559	
Various trades (union scales), [6] males	1.148	1.154	1.159	1.204	1.250	1.254	1.111

[1] Year 1925.
[2] Not including southern mills.
[3] Including southern mills.
[4] Time at face including lunch.
[5] Year 1924.
[6] A combination of the principal organized trades working at time rates.

Wage-Rate Changes in American Industries

Manufacturing Industries

DATA concerning wage-rate changes occurring between July 15 and August 15 in 89 manufacturing industries included in the monthly trend of employment survey of the Bureau of Labor Statistics are presented in the following table.

Of the 18,152 manufacturing establishments furnishing employment data in August, 17,640 establishments, or 97.2 per cent of the total, reported no change in wage rates during the month ending August 15, 1932. The employees whose wage rates were reported unchanged over the month interval totaled 2,414,199 comprising 96.4 per cent of the total number of employees included in this survey of manufacturing industries.

Decreases in rates of wages were reported by 500 establishments, or 2.8 per cent of the total number of establishments reporting. These decreases, averaging 12.7 per cent, affected 88,865 employees, or 3.5 per cent of all employees in the establishments reporting.

Twelve establishments in four industries reported wage-rate increases averaging 12.1 per cent and affecting 284 employees.

TABLE 1.—WAGE CHANGES IN **MANUFACTURING INDUSTRIES** DURING MONTH ENDING AUGUST 15, 1932

Industry	Establishments reporting	Total number of employees	Number of establishments reporting—			Number of employees having—		
			No wage changes	Wage increases	Wage decreases	No wage changes	Wage increases	Wage decreases
All manufacturing industries	18,152	2,503,348	17,640	12	500	2,414,199	284	88,865
Per cent of total	100.0	100.0	97.2	(1)	2.8	96.4	.1	3.5
Slaughtering and meat packing	232	82,857	223		9	78,059		4,798
Confectionery	326	30,706	322		4	30,409		297
Ice cream	394	13,545	385		9	13,326		219
Flour	440	16,061	432		8	15,884		177
Baking	952	61,757	938		14	61,417		340
Sugar refining, cane	15	8,117	15			8,117		
Beet sugar	52	4,138	52			4,138		
Beverages	340	10,030	333		7	9,849		181
Butter	327	6,456	312	7	8	6,320	39	97
Cotton goods	694	193,956	637		57	173,115		20,841
Hosiery and knit goods	447	92,973	430		17	88,937		4,036
Silk goods	246	39,691	241	3	2	39,166	232	293
Woolen and worsted goods	253	54,416	239		14	49,103		5,313
Carpets and rugs	33	12,364	31		2	12,182		182
Dyeing and finishing textiles	147	29,609	136		11	26,860		2,749
Clothing, men's	354	54,488	350	1	3	54,305	8	175
Shirts and collars	107	12,317	104		3	12,119		198
Clothing, women's	369	20,309	364		5	19,988		321
Millinery	123	7,636	120		3	7,381		255
Corsets and allied garments	30	5,119	29		1	5,104		15
Cotton small wares	112	7,324	111		1	7,319		5
Hats, fur-felt	37	5,476	36		1	5,447		29
Men's furnishings	77	4,224	77			4,224		
Iron and steel	212	162,725	203		9	157,288		5,437
Cast-iron pipe	39	5,652	31		8	3,949		1,703
Structural and ornamental ironwork	187	15,401	185		2	15,392		9
Hardware	115	20,116	110		5	18,712		1,404
Steam fittings, and steam and hot-water heating apparatus	105	13,242	103		2	13,046		196
Stoves	160	13,947	156		4	13,687		260
Bolts, nuts, washers, and rivets	68	8,147	68			8,147		
Cutlery (not including silver and plated cutlery) and edge tools	127	8,744	126		1	8,734		10
Forgings, iron and steel	62	5,239	59		3	4,991		248

[1] Less than one-tenth of 1 per cent.

TABLE 1.—WAGE CHANGES IN **MANUFACTURING INDUSTRIES** DURING MONTH ENDING AUGUST 15, 1932—Continued

Industry	Establishments reporting	Total number of employees	Number of establishments reporting—			Number of employees having—		
			No wage changes	Wage increases	Wage decreases	No wage changes	Wage increases	Wage decreases
Plumbers' supplies	69	6,823	65	----	4	5,768	----	1,055
Tin cans and other tinware	58	8,618	57	----	1	8,566	----	52
Tools (not including edge tools, machine tools, files, or saws)	129	5,671	124	----	5	5,413	----	258
Wirework	70	5,056	68	----	2	4,736	----	320
Lumber—								
Sawmills	631	56,990	614	----	17	54,485	----	2,505
Millwork	465	16,980	449	----	16	16,223	----	757
Furniture	481	39,497	462	----	19	38,046	----	1,451
Turpentine and rosin	21	1,000	20	----	1	994	----	6
Leather	165	22,877	159	----	6	22,381	----	496
Boots and shoes	332	108,849	330	----	2	108,508	----	341
Paper and pulp	419	76,610	405	----	14	73,239	----	3,371
Paper boxes	315	19,367	309	----	6	18,939	----	428
Printing:								
Book and job	766	47,648	752	----	14	47,241	----	407
Newspapers and periodicals	471	65,623	450	----	21	63,823	----	1,800
Chemicals	116	19,643	115	----	1	19,554	----	89
Fertilizers	209	4,908	205	----	4	4,808	----	100
Petroleum refining	118	47,656	117	----	1	47,651	----	5
Cottonseed oil, cake, and meal	53	1,605	53	----	----	1,605	----	----
Druggists' preparations	41	7,149	41	----	----	7,149	----	----
Explosives	22	2,678	12	----	10	1,737	----	941
Paints and varnishes	360	14,969	354	----	6	14,795	----	174
Rayon	22	18,014	16	----	6	11,594	----	6,420
Soap	87	12,100	87	----	----	12,100	----	----
Cement	124	12,968	123	----	1	12,678	----	290
Brick, tile, and terra cotta	667	19,857	645	----	22	18,438	----	1,419
Pottery	122	12,854	116	1	5	12,572	5	277
Glass	196	30,387	189	----	7	29,863	----	524
Marble, granite, slate, and other stone products	218	5,716	216	----	2	5,678	----	38
Stamped and enameled ware	91	12,397	88	----	3	11,936	----	461
Brass, bronze, and copper products	206	26,197	200	----	6	25,931	----	266
Aluminum manufactures	27	4,752	26	----	1	4,739	----	13
Clocks, time recording devices, and clock movements	22	3,383	22	----	----	3,383	----	----
Gas and electric fixtures, lamps, lanterns, and reflectors	54	4,316	53	----	1	3,231	----	1,085
Plated ware	54	6,969	53	----	1	6,942	----	27
Smelting and refining—copper, lead, and zinc	28	7,157	27	----	1	7,133	----	24
Jewelry	151	7,392	151	----	----	7,392	----	----
Chewing and smoking tobacco and snuff	35	10,237	34	----	1	10,219	----	18
Cigars and cigarettes	219	45,382	217	----	2	44,365	----	1,017
Automobiles	247	204,683	241	----	6	203,550	----	1,133
Aircraft	29	4,260	28	----	1	4,250	----	10
Cars, electric and steam railroad	35	4,507	35	----	----	4,507	----	----
Locomotives	11	2,402	11	----	----	2,402	----	----
Shipbuilding	97	26,868	96	----	1	23,518	----	3,350
Rubber tires and inner tubes	41	44,361	40	----	1	44,145	----	216
Rubber boots and shoes	7	5,566	7	----	----	5,566	----	----
Rubber goods, other than boots, shoes, tires, and inner tubes	104	17,623	103	----	1	17,602	----	21
Agricultural implements	76	5,210	76	----	----	5,210	----	----
Electrical machinery, apparatus, and supplies	291	91,467	289	----	2	91,413	----	54
Engines, turbines, tractors, and water wheels	85	15,029	84	----	1	14,818	----	211
Cash registers, adding machines, and calculating machines	45	13,130	44	----	1	9,566	----	3,564
Foundry and machine-shop products	1,092	96,376	1,053	----	39	94,224	----	2,152
Machine tools	151	9,804	148	----	3	9,756	----	48
Textile machinery and parts	35	5,630	35	----	----	5,630	----	----
Typewriters and supplies	18	6,297	18	----	----	6,297	----	----
Radio	40	15,705	39	----	1	15,405	----	300
Electric-railroad repair shops	403	21,141	387	----	16	19,704	----	1,437
Steam-railroad repair shops	529	66,212	524	----	5	66,066	----	146

Nonmanufacturing Industries

IN THE following table are presented data concerning wage-rate changes occurring between July 15 and August 15, 1932, reported by firms in 14 nonmanufacturing groups included in the bureau's monthly employment survey.

No changes in wage-rates over the month interval were reported by firms in the anthracite mining or crude petroleum producing groups. In each of the remaining 12 groups a number of establishments reported decreases in wage rates, the average per cent of decrease ranging from 8.2 per cent in the electric railroad group to 15.6 per cent in the dyeing and cleaning group. The wage rate decreases reported in the telephone and telegraph group averaged 8.6 per cent and those reported in the power and light group averaged 9.7 per cent. With the exception of the bituminous coal mining group, in which the average per cent of decrease in wage rates was 14.6 per cent, the remaining groups reported decreases in wage rates averaging from 10 to 12 per cent. No increases in wage-rates from July to August were reported by establishments in these 14 nonmanufacturing groups.

TABLE 2.—WAGE CHANGES IN **NONMANUFACTURING INDUSTRIES** DURING MONTH ENDING AUGUST 15, 1932

Industrial group	Establishments reporting	Total number of employees	Number of establishments reporting—		Number of employees having—	
			No wage changes	Wage decreases	No wage changes	Wage decreases
Anthracite mining	160	67,212	160		67,212	
Per cent of total	100.0	100.0	100.0		100.0	
Bituminous coal mining	1,145	151,795	1,091	54	144,008	7,787
Per cent of total	100.0	100.0	95.3	4.7	94.9	5.1
Metalliferous mining	256	18,310	254	2	17,694	616
Per cent of total	100.0	100.0	99.2	0.8	96.6	3.4
Quarrying and nonmetallic mining	628	23,853	616	12	23,494	359
Per cent of total	100.0	100.0	98.1	1.9	98.5	1.5
Crude petroleum producing	273	21,793	273		21,793	
Per cent of total	100.0	100.0	100.0		100.0	
Telephone and telegraph	8,049	274,060	8,009	40	273,700	360
Per cent of total	100.0	100.0	99.5	0.5	99.9	0.1
Power and light	3,494	219,521	3,473	21	218,339	1,182
Per cent of total	100.0	100.0	99.4	0.6	99.5	0.5
Electric-railroad and motor-bus operation and maintenance	501	136,103	468	33	127,958	8,145
Per cent of total	100.0	100.0	93.4	6.6	94.0	6.0
Wholesale trade	2,688	70,494	2,649	39	69,571	923
Per cent of total	100.0	100.0	98.5	1.5	98.7	1.3
Retail trade	14,057	311,404	14,017	40	309,430	1,974
Per cent of total	100.0	100.0	99.7	0.3	99.4	0.6
Hotels	2,580	138,361	2,551	29	136,950	1,411
Per cent of total	100.0	100.0	98.9	1.1	99.0	1.0
Canning and preserving	913	72,270	909	4	72,120	150
Per cent of total	100.0	100.0	99.6	0.4	99.8	0.2
Laundries	1,006	60,232	987	19	59,148	1,084
Per cent of total	100.0	100.0	98.1	1.9	98.2	1.8
Dyeing and cleaning	398	12,159	387	11	11,725	434
Per cent of total	100.0	100.0	97.2	2.8	96.4	3.6

Wage Changes Reported by Trade-Unions Since June, 1932

CHANGES in the wages and hours of labor of trade-unionists and municipal employees which occurred during the period June to September, 1932, and which have been reported to the bureau during the past month, are tabulated in the table following. The tabulation covers 71,542 workers, of whom 1,826 were reported to have gone on the 5-day week.

No renewals of wage agreements were reported.

RECENT WAGE CHANGES, BY INDUSTRY, OCCUPATION, AND LOCALITY, JUNE TO SEPTEMBER, 1932

Industry or occupation and locality	Date of change	Rate of wages		Hours per week	
		Before change	After change	Before change	After change
Bakers:					
Alexandria, Va.—		*Per week*	*Per week*		
Daywork	June 21	$48.00	$43.20	48	48
Nightwork	do	57.60	51.84	48	48
Fresno, Calif.—					
Foremen	June 1	51.00	45.90	48	48
Oven men	do	48.00	43.20	48	48
Dough mixers	do	48.00	45.00	48	48
Bench hands	do	45.00	40.50	48	48
Peoria, Ill.—					
Foremen	June 1	40.00–45.00	35.00–40.00	48	48
Oven men	do	33.00–37.00	29.00–33.00	48	48
Benchmen	do	31.00–34.00	27.00–30.00	48	48
Rock Island, Ill.—					
Foremen	June 13	39.00–44.40	37.29–42.42	48	48
Bakers	do	34.20–39.00	32.49–37.29	48	48
Benchmen	do	27.00–31.80	25.65–30.45	48	48
Washington, D. C.—					
Daywork	June 21	48.00	43.20	48	48
Nightwork	do	57.60	51.84	48	48
Building trades workers:					
Asbestos workers—		*Per hour*	*Per hour*		
Boston, Mass	June 1	1.50	1.25	40	40
New Haven, Conn	do	1.37½	1.12½	40	40
Bricklayers and masons—					
Baltimore, Md., marble setters	do	1.50	1.25	40	40
Boston, Mass.—					
Mosaic and terrazzo workers	do	1.50	1.25	40	40
Tile layers	June 13	1.50	1.30	40	40
Buffalo, N. Y.—					
Bricklayers	June 1	1.50	1.25	40	40
Marble setters, mosaic and terrazzo workers	do	1.50	1.37½	40	40
Stonemasons	do	1.50	1.25	40	40
Richmond, Va.—					
Bricklayers and stonemasons	do	1.50	1.25	40	40
Marble setters	do	1.50	1.37½	40	40
Mosaic and terrazzo workers	do	1.37½	1.25	40	40
Tile layers	do	1.37½	1.25	40	40
St. Paul, Minn.—					
Bricklayers and stonemasons	do	1.25	1.10	44	44
Marble setters	do	1.37½	1.22½	44	44
Tile layers	do	1.25	1.12½	40	40
Spokane, Wash., bricklayers and masons	do	1.50	1.25	40	40
Carpenters—					
Hamilton, Ohio, and vicinity	July 28	1.12	1.00	[1] 8	[1] 8
Minneapolis, Minn	June 1	1.00	.85	44	40
St. Paul, Minn	do	1.00	.85	44	40
West Frankfort, Ill	June 25	1.00	.75	44	44
Cement finishers, Buffalo, N. Y	June 1	1.12½	.90	40	40
Electrical workers—					
Galesburg, Ill	July —	1.12½	.90	44	40
St. Paul, Minn	June 1	1.12½	1.00	44	44
Elevator constructors—					
Buffalo, N. Y	do	1.47½	1.36	40	40
Helpers	do	1.03	.95	40	40
Columbus, Ohio	do	1.34	1.16	44	40
Helpers	do	1.02	.81	44	40
Detroit, Mich	do	1.50	1.31	44	40
Helpers	do	1.00	.91	44	40

[1] Hours per day.

RECENT WAGE CHANGES, BY INDUSTRY, OCCUPATION, AND LOCALITY, JUNE TO SEPTEMBER, 1932—Continued

Industry or occupation and locality	Date of change	Rate of wages		Hours per week	
		Before change	After change	Before change	After change
Building trades workers—Continued.					
Elevator constructors—Continued.		*Per hour*	*Per hour*		
Memphis, Tenn	June 18	$1.34	$1.17½	40	40
Helpers	do	.94	.82	40	40
Richmond, Va	June 1	1.23	1.14	44	44
Helpers	do	.86	.80	44	44
Saginaw, Mich	do	1.23	1.13	44	44
Helpers	do	.86	.79	44	44
Springfield, Mass	do	1.43	1.22½	40	40
Toledo, Ohio	do	1.43	1.23	44	44
Helpers	do	1.00	86	44	44
Youngstown, Ohio	do	1.48	1.35	40	40
Helpers	do	1.08	.95	40	40
Engineers, portable and hoisting—					
Erie, Pa	do	1.37½	1.25	44	44
Louisville, Ky	do	1.25	1.00	44	44
Granite cutters—					
Springfield, Mass	do	1.12½	1.00	44	44
Worcester, Mass	do	1.12½–1.18	1.00–1.05½	44	44
Hod carriers and laborers, Des Moines, Iowa—					
Hod carriers and plasterers' laborers	June 3	.90	.75	40	40
Mortar mixers	do	.77½	.60	40	40
Lathers, Belleville, Ill., and vicinity	June 1	1.62½	1.37½	40	40
Painters—					
Spokane, Wash	do	.87½	.80	40	40
Texarkana, Ark.-Tex	Sept. 1	1.00	.75	40	44
Plasterers, Detroit, Mich	June 1	1.37½	1.25	44	44
Plumbers—					
Dutchess County, N. Y	July 1	1.31¼	1.12½	40	40
Fall River, Mass	Aug. 1	1.00	.85	40	40
Hamilton, Ohio	July 1	1.37½	1.12½	40	40
Little Rock, Ark	June 1	1.00	.90	44	44
Niagara Falls, N. Y	June 30	1.37½	1.10	40	40
Terre Haute, Ind	June 1	1.31¼	1.12½	44	40
Sheet-metal workers, Memphis, Tenn	do	1.10	.90	40	40
Sprinkler fitters, Baltimore, Md	do	1.37½	1.25	40	40
Steam fitters—					
Dutchess County, N. Y	July 1	1.31¼	1.12½	40	40
Hamilton, Ohio	do	1.37½	1.12½	40	40
Little Rock, Ark	June 1	1.00	.90	44	44
Milwaukee, Wis	do	.93¾	1.00	40	40
Newark, N. J	do	1.65	1.50	40	40
Helpers	do	1.12½	1.00	40	40
Niagara Falls, N. Y	June 30	1.37½	1.10	40	40
Terre Haute, Ind	June 1	1.31¼	1.12½	44	40
Stonecutters, Washington, D. C	do	1.25	1.25	44	40
Structural-iron workers, Buffalo, N. Y	June 15	1.37½	1.25	44	44
Chauffeurs and teamsters, Seattle, Wash.:		*Per week*	*Per week*		
Bakery salesmen-drivers	June 20	45.00	41.00	48	48
Clothing workers:					
Cloak and suit makers, New York, N. Y.—					
Cloak and dress cutters	July 29	[2]	47.00	40	40
Sample makers	do	[2]	40.00	40	40
Jacket, coat, reefer, and dress operators	do	[2]	50.00	40	40
Skirt operators	do	[2]	48.00	40	40
Piece tailors	do	[2]	43.00	40	40
Reefer, jacket, and coat finishers	do	[2]	41.00	40	40
Reefer, jacket, and coat finishers' helpers	do	[2]	33.00	40	40
Jacket, coat, reefer, and dress upper pressers	do	[2]	45.00	40	40
Jacket, coat, reefer, and dress under pressers	do	[2]	41.00	40	40
Skirt upper pressers	do	[2]	41.00	40	40
Skirt under pressers	do	[2]	41.00	40	40
Skirt basters	do	[2]	27.00	40	40
Skirt finishers	do	[2]	23.50	40	40
Drapers	do	[2]	29.00	40	40
Begraders on skirts	do	[2]	32.50	40	40
Bushelmen	do	[2]	36.00	40	40
Examiners	do	[2]	36.00	40	40
Food workers, Sacramento, Calif.:					
Meat cutters	June 9	40.00	37.00	54	54
		Per hour	*Per hour*		
Glass-bottle blowers, United States	Sept. 1	[3].60	[3].50	[1]8	[1]8
Iron, steel, and tin workers, Seattle, Wash.:					
Steel workers, rolling department	July 16	[2]	[4]	[1]8	[1]8

[1] Hours per day. [2] Not reported. [3] Plus bonus. [4] 12½ per cent reduction.

RECENT WAGE CHANGES, BY INDUSTRY, OCCUPATION, AND LOCALITY, JUNE TO SEPTEMBER, 1932—Continued

Industry or occupation and locality	Date of change	Rate of wages		Hours per week	
		Before change	After change	Before change	After change
Metal workers:		*Per hour*	*Per hour*		
Boilermakers, Bristol, Va.	July 1	$0.80	$0.72	40	32
Machinists—		*Per week*	*Per week*		
Brooklyn, N. Y.	July —	42.61	38.58	44	40
		Per hour	*Per hour*		
Somerset, Ky.	July 1	.56	.50	48	32
Molders—		*Per day*	*Per day*		
Cincinnati, Ohio	Aug. 8	7.50	6.00	48	48
Hamilton, Ohio	do	7.50	6.00	48	(2)
Philadelphia, Pa.	Aug. 1	7.00	6.40	48	48
		Per hour	*Per hour*		
Patternmakers, Milwaukee, Wis.	June 1	1.25	.80–1.00	44–47½	40–45
Miners:		*Per day*	*Per day*		
Coal miners (day work), Hudson and Sheridan fields, Wyoming	Aug. 6	6.72	5.42	[1] 8	[1] 8
Potters, United States	Aug. 15	(5)	(6)	(2)	(2)
Printing and publishing trades:					
Compositors and machine operators—					
Charleston, S. C.—		*Per week*	*Per week*		
Newspaper, day	June 7	45.12	40.61	48	48
Newspaper, night	do	48.00	43.49	48	48
Cleveland, Ohio—					
Newspaper, day	July 1	53.55	51.07	45	45
Newspaper, night	do	58.95	56.25	45	45
Newspaper, midnight	do	60.48	57.54	42	42
Louisville, Ky.—					
Newspaper, day	June 6	45.00	40.50	48	48
Newspaper, night	do	48.00	43.50	48	48
Minneapolis, Minn.—					
Newspaper, day—					
Rate A	June 4	50.00	45.00	46½	46½
Rate B	do	52.00	46.80	46½	46½
Newspaper, night—					
Rate A	do	53.00	47.70	42	42
Rate B	do	55.00	49.50	42	42
Electrotypers—					
Louisville, Ky.—					
Foremen	June 1	50.00	30.00	44	44
Journeymen	do	40.00	30.00	44	44
Finishers	do	35.00	26.25	44	44
Milwaukee, Wis.	do	50.00	40.00	44	44
Pressmen and assistants—					
Atlanta, Ga., job work—					
Pressmen, cylinder	June 6	36.50–50.00	32.85–45.00	44	44
Pressmen, platen	do	36.50–40.00	32.85–36.00	44	44
Press assistants and feeders	do	23.50–29.00	21.15–26.10	44	44
Birmingham, Ala., job work—					
Pressmen, cylinder	June 1	40.00–44.00	38.00–41.60	44	44
Pressmen, platen	do	36.50	32.50–35.00	44	44
Press assistants and feeders	do	19.50–26.50	16.50–25.00	44	44
		Per day	*Per day*		
Louisville, Ky., web pressmen—					
Foremen, day	June 20	8.00	7.50	48	48
Foremen, night	do	8.00	7.50	43	43
Journeymen, day	do	7.50	7.00	48	48
Journeymen, night	do	7.50	7.00	43	43
Foremen, day	Sept. 4	7.50	7.25	48	48
Foremen, night	do	7.50	7.25	43	43
Journeymen, day	do	7.00	6.75	48	48
Journeymen, night	do	7.00	6.75	43	43
Street-railway workers:					
Chicago, Ill., and vicinity—		*Per hour*	*Per hour*		
Motormen and conductors	June 1	.77	.70	(8)	(8)
New Haven, Conn., and vicinity—					
Bus operators	June 1	.72	.60	42–56	42–56
Motormen and conductors	do	.62	.53	42–56	42–56
1-man car operators	do	.69	.60	42–56	42–56
Shopmen	do	.44–.67½	(7)	42–56	42–56
Pueblo, Colo.	Aug. 1	.65	.65	[1] 7	[1] 6

[1] Hours per day.
[2] Not reported.
[5] Piecework.
[6] 10 per cent reduction.
[7] 14½ per cent reduction.
[8] Hours irregular.

RECENT WAGE CHANGES, BY INDUSTRY, OCCUPATION, AND LOCALITY, JUNE TO SEPTEMBER, 1932—Continued

Industry or occupation and locality	Date of change	Rate of wages		Hours per week	
		Before change	After change	Before change	After change
Street-railway workers—Continued.					
St. Louis, Mo.—					
Motormen and conductors—		*Per hour*	*Per hour*		
First year	June 1	$0.468	$0.452	[8]	[8]
Second year	do	.522	.504	[8]	[8]
Third year	do	.576	.557	[8]	[8]
Fourth year	do	.621	.60	[8]	[8]
1-man car and bus operators—					
First year	do	.538	.502	[8]	[8]
Second year	do	.592	.554	[8]	[8]
Third year	do	.646	.607	[8]	[8]
Fourth year	do	.691	.65	[8]	[8]
Municipal employees:					
Allentown, Pa., school employees	July 1	[2]	[6]	[2]	[2]
Chester, Pa.—					
Employees receiving less than $1,500 per year	do	[9]	[10]	50	50
Employees receiving $1,500 and over per year	do	[9]	[6]	50	50
Colorado Springs, Colo	do	[9]	[11]	[2]	[2]
Dade County, Fla., school employees	do	[9]	[6]	[2]	[2]
Du Quoin, Ill	June 1	[9]	[12]	[2]	[2]
Jefferson County, Ala., school teachers	Sept. 5	[9]	[6]	30	30
Newark, N. J	July 1	[9]	[13]	[2]	[2]
Newberg, Oreg	June 1	[9]	[6]	[2]	[2]
Ocean City, N. J	Sept. 1	[9]	[6]	[2]	[2]
Portland, Oreg	June 1	[9]	[14]	44	44

[2] Not reported.
[6] 10 per cent reduction.
[8] Hours irregular.
[9] Various.
[10] 5 per cent reduction.
[11] 7½ to 15 per cent reduction.
[12] 16 per cent reduction.
[13] 1 to 15 per cent reduction.
[14] 3 to 14 per cent reduction.

Eight-Hour Day Regulations for Brazilian Workers [1]

ON MAY 4, 1932, a decree (No. 21,364) was passed in Brazil which provides that the working-day in all industrial establishments shall normally be 8 hours and specifies that the day's work must be carried out between 5 a. m. and 10 p. m.

The working week shall consist of 48 hours so arranged that for each period of 6 working-days there shall be one day of rest, of at least 24 consecutive hours, to be observed preferably on Sunday. In order to prevent accidents or to make urgent repairs, the weekly rest period may be suspended. The workday may be increased to 10 hours (or the week to 60 hours) if an agreement is made between the employer and the employees and provision is made for the payment of additional wages. In unhealthful industries and those carried on underground, however, the workday may not exceed 8 hours. When overtime work is necessary to prevent raw materials from deteriorating or to finish certain work or articles in process of manufacture, the workday may, in exceptional cases, be extended to 12 hours if provision is made in an agreement between the employer and the workers for an increase in wages for the extra time.

The decree provides that any industrial enterprise may be run continuously if the workers are employed by shifts.

[1] Data are from Brazil, Diario Oficial, Rio de Janeiro, May 6, 1932.

In certain industries the workday may be divided into two periods with an intervening rest period of at least 3 hours, provided the actual working hours do not exceed 10.

Night work may not exceed 7 hours of actual work except in continuous industries and in those subject to special regulations issued by the Minister of Labor, Industry, and Commerce.

Both day and night work shall be stopped for at least half an hour for an interval of rest or lunch, which shall not be computed in the actual working time.

When an accident or force majeure causes a stoppage of work, the length of subsequent working-days may be increased until the lost time is made up. However, the workday shall not be increased more than 2 hours a day.

Members of the same family who are engaged in manual work and those who hold executive, administrative, or confidential positions shall be exempt from these regulations. This decree, also, does not affect the working-day in agricultural enterprises, general transportation activities, maritime trades, mining, and the operation of Federal, State, or municipal public utilities in charge of private corporations, which is subject to special regulations by the Minister of Labor, Industry, and Commerce.

Violations of the provisions of this decree shall be punished with a fine to be imposed by the National Department of Labor.

Wages and Hours of Work in British Columbia, 1931

THE following statistics on wages and hours in British Columbia are taken from the annual report of the Department of Labor of that Province for the year ending December 31, 1931.

The average full week's wages of adult males in British Columbia in various industries in 1931 are presented in Table 1. It will be noted that the average for all industries is $2.47 per week less in 1931 than in 1930.

TABLE 1.—AVERAGE FULL WEEK'S WAGES OF ADULT MALES IN SPECIFIED INDUSTRIES IN BRITISH COLUMBIA IN 1931

Industry group	Average wage, 1931		Industry group	Average wage, 1931	
	Amount	Change from 1930		Amount	Change from 1930
Breweries	$27.58	+$0.18	Metal mining	$30.02	−$3.29
Builders' materials	25.81	−1.57	Metal trades	27.74	−2.22
Cigar and tobacco manufacturing	20.40	−4.66	Miscellaneous trades and industries	23.43	−2.45
Coal mining	28.40	−.63	Oil refining	31.24	+1.46
Coast shipping	29.63	−1.73	Paint manufacture	26.11	+.26
Contracting	27.41	−2.93	Printing and publishing	39.78	+.44
Explosives and chemicals	26.78	+.12	Pulp and paper manufacturing	25.94	−1.45
Food products' manufacture	23.43	−4.36	Shipbuilding	29.58	−.77
Garment making	22.51	−5.83	Smelting	30.44	+.39
House furnishings	23.18	−2.36	Street railways, gas, water, power, telephones, etc	29.11	−.91
Jewelry manufacture	31.29	−6.56	Wood manufacturing (n. e. s.)	23.67	−2.36
Laundries, cleaning, and dyeing	25.29	−1.87			
Leather and fur goods manufacture	25.81	−2.50	Average	26.17	−2.47
Lumber industries	21.09	−4.60			

According to Table 2 there were 16,264 adult male workers being paid wage rates of less than $19 per week, 5,521 being paid less than $15 per week.

TABLE 2.—NUMBER OF ADULT MALE WORKERS EMPLOYED AT SPECIFIED RATES, IN BRITISH COLUMBIA, 1931

Weekly rate	Number of adult male workers		Weekly rate	Number of adult male workers	
	1931	Increase over 1930		1931	Increase over 1930
Under $6	3	3	$13 to $13.99	953	769
$6 to $6.99	35	35	$14 to $14.99	1,973	1,157
$7 to $7.99	81	81	$15 to $15.99	2,675	1,721
$8 to $8.99	79	76	$16 to $16.99	3,322	2,288
$9 to $9.99	147	100	$17 to $17.99	1,989	39
$10 to $10.99	526	469	$18 to $18.99	2,757	809
$11 to $11.99	550	462			
$12 to $12.99	1,174	992	Total	16,264	9,011

The average full weekly working hours of 4,088 British Columbia firms making returns for 1931 was 47.37 as compared with 48.62 for the preceding year based on reports from 4,704 firms.

TABLE 3.—AVERAGE FULL WEEKLY HOURS OF WORK IN BRITISH COLUMBIA, BY INDUSTRIES, 1931

Industry	Hours per week, 1931		Industry	Hours per week, 1931	
	Number	Change from 1930		Number	Change from 1930
Breweries	46.98	−0.20	Lumber industries—Continued.		
Builders' materials, etc	45.64	−1.45	Sawmills	47.39	−1.56
Cigar and tobacco manufacturing	44.82	−.18	Shingle mills	47.52	−.32
Coal mining	46.75	−1.28	Metal mining	51.46	−.83
Coast shipping	53.69	−.25	Metal trades	45.85	−.03
Contracting	44.08	−1.08	Miscellaneous trades and industries	48.89	+1.57
Explosives, chemicals, etc	44.80	−.50	Oil refining	50.47	−4.14
Food products manufacture	48.84	−3.39	Paint manufacturing	44.33	−.07
Garment making	44.53	+.45	Printing and publishing	45.29	−.23
House furnishings	44.29	−.96	Pulp and paper manufacturing	48.11	−.21
Jewelry manufacture	43.06	−1.01	Shipbuilding	44.13	−.22
Laundries, cleaning, and dyeing	45.93	−.13	Smelting	52.04	+.03
Leather and fur goods manufacture	46.07	−.60	Street railways, gas, water, power, etc	44.85	−1.40
Lumber industries:			Wood manufacture (not elsewhere specified)	45.20	−.72
Logging	48.46	+.02			
Logging railways	49.13	−.96	Total	47.37	−1.25
Lumber dealers	47.65	+.06			
Planing mills	47.33	−1.35			

Earnings and Hours in the Electrotechnical Industry in Germany in October, 1931

THE investigation of the average actual hourly and weekly earnings and weekly hours of labor in the electrotechnical industry in Germany in October, 1931, undertaken by the German Federal Statistical Office, covered 31 establishments with 60,429 workers in 17 localities.[1]

Table 1 shows the earnings and hours in October, 1931, and Table 2 shows a comparison of these with those in October, 1928. The data for 1931 in the two tables are not identical owing to certain differences in the coverage of the two investigations.

[1] Germany. Federal Statistical Office. Wirtschaft und Statistik, July 2, 1932, pp. 439–441.

TABLE 1.—AVERAGE ACTUAL EARNINGS AND HOURS OF LABOR IN THE ELECTROTECHNICAL INDUSTRY IN GERMANY IN OCTOBER, 1931

[Conversions into United States currency on basis of mark=23.8 cents; pfennig=0.238 cent]

Occupation group	Number of employees	Hours per week	Hourly earnings [1]		Agreement hourly earnings		Per cent actual earnings form of union rate	Weekly earnings [1]	
			German currency	U.S. currency	German currency	U.S. currency		German currency	U.S. currency
			Pfennigs	*Cents*	*Pfennigs*	*Cents*		*Marks*	
Skilled time workers	7,708	41.72	110.4	26.3	94.4	22.5	116.2	46.04	$10.96
Skilled piece workers	14,712	39.21	120.2	28.6	107.2	25.5	111.8	47.14	11.22
Total	22,420	40.07	116.7	27.8	102.6	24.4	113.3	46.77	11.13
Semiskilled time workers	3,143	41.36	87.8	20.9	78.6	18.7	110.4	36.32	8.64
Semiskilled piece workers	7,121	39.67	103.9	24.7	89.5	21.3	115.3	40.59	9.66
Total	10,264	39.77	98.8	23.5	86.0	20.5	114.0	39.28	9.35
Unskilled time workers	5,156	40.79	79.7	19.0	76.1	18.1	104.1	32.51	7.74
Unskilled piece workers	1,931	38.41	95.5	22.7	86.9	20.7	109.6	36.68	8.73
Total	7,087	40.15	83.8	19.9	78.9	18.8	105.7	33.64	8.01
Total, male	39,771	40.01	106.2	25.3	94.1	22.4	112.3	42.50	10.12
Female time workers	3,118	41.29	57.6	13.7	53.6	12.8	107.1	23.79	5.66
Female piece workers	17,540	37.85	66.0	15.7	60.6	14.4	108.9	24.98	5.95
Total, female	20,658	38.37	64.6	15.4	59.5	14.2	108.6	24.80	5.90
Total, male and female	60,429	39.45	92.4	22.0	82.6	19.7	111.4	36.45	8.68

[1] Including supplements.

TABLE 2.—EARNINGS AND HOURS OF LABOR IN THE ELECTROTECHNICAL INDUSTRY OF GERMANY IN OCTOBER, 1928, AND OCTOBER, 1931

[Conversions into United States currency on basis of mark=23.8 cents; pfennig=0.238 cent]

Occupation group	Hourly earnings [1]			Weekly hours of labor			Weekly earnings		
	October, 1928	October, 1931		October, 1928	October, 1931		October, 1928	October, 1931	
		Amount	Per cent of October, 1928, earnings		Number	Per cent of October, 1928, hours		Amount	Per cent of October, 1928, earnings
	Cents	*Cents*							
Skilled time workers	27.3	26.4	96.7	49.50	41.13	83.1	$13.51	$10.84	80.3
Skilled piece workers	29.7	28.6	96.5	47.50	38.76	81.6	14.10	11.10	78.8
Semiskilled time workers	21.6	20.9	97.0	49.50	40.59	82.0	10.71	8.50	79.4
Semiskilled piece workers	25.9	24.8	95.5	46.75	38.24	81.8	12.14	9.47	78.0
Unskilled time workers	19.6	19.0	96.7	49.00	40.36	82.4	9.59	7.66	79.9
Unskilled piece workers	22.9	22.7	99.4	47.25	37.79	80.0	10.78	8.59	79.7
Female time workers	14.2	13.8	97.1	45.50	40.60	89.2	6.46	5.60	86.7
Female piece workers	15.9	15.8	99.0	46.25	37.14	80.3	7.37	5.85	79.4

[1] Including agreement supplements.

Thus the hourly earnings decreased by 2.7 per cent, the hours of labor decreased by 18.1 per cent, and the weekly earnings decreased by 20.4 per cent in October, 1931, as compared with those in October, 1928.

Earnings and Hours in the Manufacture of Iron and Steel Products in Germany in October, 1931

THE investigation of the average actual hourly and weekly earnings and weekly hours of labor in the manufacture of iron and steel products in Germany, in October, 1931, undertaken by the German Federal Statistical Office, covered 127 establishments with 26,293 workers in 28 localities.[1]

Table 1 shows earnings and hours of labor in October, 1931, and Table 2 shows a comparison of these earnings and hours with those in October, 1928. The data for 1931 in the two tables are not identical owing to certain differences in the coverage of the two investigations.

TABLE 1.—AVERAGE ACTUAL EARNINGS AND HOURS OF LABOR IN THE MANUFACTURE OF IRON AND STEEL PRODUCTS IN GERMANY IN OCTOBER, 1931

[Conversions into United States currency on basis of mark=23.8 cents; pfennig=0.238 cent]

Occupation group	Number of employees	Hours per week	Hourly earnings[a]		Agreement hourly wages		Per cent actual earnings form of union rate	Average weekly earnings[a]	
			German currency	U. S. currency	German currency	U. S. currency		German currency	U. S. currency
			Pfennigs	*Cents*	*Pfennigs*	*Cents*		*Marks*	
Skilled time workers	4,718	40.88	96.0	22.8	78.4	18.7	120.9	39.23	$9.34
Skilled piece workers	5,896	39.67	107.6	25.6	88.8	21.1	119.9	42.70	10.16
Total	10,614	40.21	102.3	24.3	83.9	20.0	120.6	41.15	9.79
Semiskilled time workers	2,330	42.12	84.2	20.0	71.7	17.1	114.6	35.47	8.44
Semiskilled piece workers	5,750	39.45	99.9	23.8	79.8	19.0	122.7	39.43	9.38
Total	8,080	40.23	95.1	22.6	77.4	18.4	120.3	38.27	9.11
Unskilled time workers	1,785	42.35	79.6	18.9	69.6	16.6	111.9	33.73	8.03
Unskilled piece workers	1,202	42.45	95.8	22.8	79.8	19.0	117.5	40.65	9.67
Total	2,987	42.39	86.2	20.5	73.7	17.5	114.4	36.53	8.69
Total, male	21,681	40.51	97.4	23.2	80.0	19.0	119.8	39.45	9.39
Female time workers	1,441	41.68	50.3	12.0	46.2	11.0	108.2	20.95	4.99
Female piece workers	3,171	39.04	60.3	14.4	51.9	12.4	115.8	23.52	5.60
Total, female	4,612	39.87	57.0	13.6	50.0	11.9	113.6	22.72	5.41
Total, male and female	26,293	40.40	90.4	21.5	74.8	17.8	19.0	36.52	8.69

[a] Including all agreement supplements.

[1] Germany. Federal Statistical Office. Wirtschaft und Statistik, Aug. 1, 1932, pp. 469–471.

TABLE 2.—EARNINGS AND HOURS OF LABOR IN THE IRON AND STEEL PRODUCTS INDUSTRY OF GERMANY, IN OCTOBER, 1928, AND OCTOBER, 1931

[Conversions into United States currency on basis of mark=23.8 cents]

Occupation group	Hourly earnings [1]			Weekly hours of labor			Weekly earnings		
		October, 1931			October, 1931			October, 1931	
	October, 1928	Amount	Per cent of October, 1928, earnings	October, 1928	Number	Per cent of October, 1928, hours	October, 1928	Amount	Per cent of October, 1928, earnings
	Cents	*Cents*							
Skilled time workers	23.6	22.6	96.0	50.25	39.99	79.6	$11.85	$ 9.05	76.4
Skilled piece workers	28.1	25.8	91.9	48.00	38.31	79.8	13.50	9.88	73.2
Semiskilled time workers	21.2	20.3	96.2	49.75	40.98	82.5	10.51	8.33	79.3
Semiskilled piece workers	26.0	23.6	91.0	47.75	38.94	81.5	12.42	9.20	74.1
Unskilled time workers	19.8	19.2	96.9	49.25	40.20	81.6	9.75	7.72	79.2
Unskilled piece workers	25.1	23.2	92.5	47.75	43.35	90.8	11.99	10.05	83.8
Female time workers	12.7	12.0	94.4	44.75	38.80	86.7	5.69	4.64	81.7
Female piece workers	15.1	14.7	97.6	45.25	36.86	81.5	6.81	5.42	79.7

[1] Including agreement supplements.

Thus, as the table indicates, the hourly earnings decreased on an average by 5.8 per cent, weekly hours of labor by 18.5 per cent, and weekly earnings by 23.3 per cent in October, 1931, as compared with those in October, 1928.

Weavers' Wages in the English Woolen-Textile Industry

A RECENT communication from the United States consul at Bradford, England, gives some figures as to the prevailing wages for woolen weavers in that district. In an introductory statement, the consul calls attention to the fact that since 1927 there has been no wages agreement between the unions and the employers, and that there are consequently no uniform standards for rates.[1] Since March, 1930, two wage cuts, totaling about 20 per cent, have been enforced against the workers, and in general employers now make individual agreements with each of their employees.

However, although there is no scale of wages operating throughout the industry as a whole, most of the employers are paying the wages set out in the last agreement, less approximately 20 per cent. These rates now represent the basic wage, plus an increase of 45.75 [per cent] on account of the increased cost of living since 1914. In a few instances the entire 20 per cent reductions have not been enforced and in consequence a small minority of weavers is being paid at slightly higher rates than those set out in the table.

It should be understood that with certain exceptions weavers are paid upon piece rates. Consequently, the actual amount of money received by weavers each week varies according to the amount of work performed, but the piece rates in the industry have been arranged in such a manner in the past that a weaver of average skill should now earn not less than the amount stated in the wages table, according to the type of loom worked. The exceptions to piecework rates are pattern weavers and others doing weaving work of a special nature to which piece rates can not equitably be applied. The time rates applied to such work are about the same as the weekly wages of piece-rate workers, although a few weavers of special skill engaged on time rates are said to be paid higher rates by individual employers.

[1] See Labor Review, April, 1932, p. 930.

The following table represents the wages paid to the majority of weavers in the worsted and woolen branches of the wool-textile industry in Yorkshire at the present time. As previously stated there is no agreement protecting these rates, and any employer may pay lower rates if he can engage workers who will accept them.

BASIC AND TOTAL WAGE RATES FOR WEAVERS IN THE YORKSHIRE (ENGLAND) WOOL TEXTILE INDUSTRY

[Conversions into United States currency on basis of pound=$4.8665, shilling=24.33 cents, penny=2.03 cents]

Kind of weaving done	Basic weekly wage				Basic wage plus cost-of-living increase			
	English currency			United States currency	English currency			United States currency
Worsted section								
	£.	s.	d.		£.	s.	d.	
Dress goods: 2 looms per weaver		19	0	$4.62	1	7	8	$6.73
Coatings: 2 looms per weaver	1	1	0	5.11	1	10	6	7.42
Coating looms, plain, including mixing boxes:								
1 loom per weaver		19	0	4.62	1	7	8	6.73
2 looms per weaver	1	1	6	5.23	1	10	10	7.50
Coating looms, plain, with drop boxes: 1 loom per weaver	1	0	0	4.87	1	9	2	7.10
Woolen section								
Tappet looms:								
1 loom per weaver		19	0	4.62	1	7	8	6.73
2 looms per weaver	1	1	6	5.23	1	10	10	7.50
Box looms, plain:								
1 loom per weaver		19	0	4.62	1	7	8	6.73
2 looms per weaver	1	1	6	5.23	1	10	10	7.50
Box looms, fancy: 1 loom per weaver	1	0	0	4.87	1	9	2	7.10
Blanket looms:								
1 loom per weaver		19	0	4.62	1	7	8	6.73
2 looms per weaver	1	1	6	5.23	1	10	10	7.50
Blanket box looms, plain: 1 loom per weaver		19	0	4.62	1	7	8	6.73
Rugs, cotton, warps: 1 loom per weaver	1	0	0	4.87	1	9	2	7.10
Plain looms and bastard box: 1 loom per weaver		19	0	4.62	1	7	8	6.73
Box looms, under 80 picks: 1 loom per weaver	1	0	0	4.87	1	9	2	7.10
Box looms, 80 picks and over: 1 loom per weaver	1	1	0	5.11	1	10	6	7.42

TREND OF EMPLOYMENT

Summary for August, 1932

EMPLOYMENT increased 0.5 per cent in August, 1932, as compared with July, 1932, and earnings decreased 1.0 per cent. These figures are based on the pay rolls ending nearest the 15th of the month.

The industrial groups surveyed, the number of establishments reporting in each group, the number of employees covered, and the earnings for one week, for both July and August, 1932, together with the per cents of change in August are shown in the following summary:

SUMMARY OF EMPLOYMENT AND EARNINGS, JULY AND AUGUST, 1932

Industrial group	Establishments	Employment		Per cent of change	Earnings in 1 week		Per cent of change
		July, 1932	August, 1932		July, 1932	August, 1932	
Manufacturing	**18,152**	**2,490,355**	**2,503,348**	[1] **+1.4**	**$42,904,628**	**$42,392,331**	[1] **+0.3**
Coal mining	**1,305**	**210,723**	**219,007**	**+3.9**	**3,038,722**	**3,443,715**	**+13.3**
Anthracite	160	60,818	67,212	+10.5	1,372,668	1,644,300	+19.8
Bituminous	1,145	149,905	151,795	+1.3	1,666,054	1,799,415	+8.0
Metalliferous mining	**256**	**18,899**	**18,310**	**−3.1**	**337,367**	**328,982**	**−2.5**
Quarrying and nonmetallic mining	**628**	**23,071**	**23,853**	**+3.4**	**366,026**	**374,357**	**+2.3**
Crude petroleum producing	**273**	**21,041**	**21,793**	**+3.6**	**635,273**	**611,769**	**−3.7**
Public utilities	**12,044**	**637,989**	**629,684**	**−1.3**	**17,941,082**	**17,570,018**	**−2.1**
Telephone and telegraph	8,049	277,324	274,060	−1.2	7,482,518	7,427,487	−.7
Power and light	3,494	221,821	219,521	−1.0	6,640,186	6,471,438	−2.5
Electric-railroad and motor-bus operation and maintenance	501	138,844	136,103	−2.0	3,818,378	3,671,093	−3.9
Trade	**16,745**	**390,583**	**381,898**	**−2.2**	**8,528,991**	**8,224,113**	**−3.6**
Wholesale	2,688	70,635	70,494	−.2	1,947,717	1,903,709	−2.3
Retail	14,057	319,948	311,404	−2.7	6,581,274	6,320,404	−4.0
Hotels	**2,580**	**139,871**	**138,361**	**−1.1**	[2] **1,930,567**	[2] **1,862,502**	**−3.5**
Canning and preserving	**913**	**53,280**	**72,270**	**+35.6**	**611,846**	**844,059**	**+38.0**
Laundries	**1,006**	**61,295**	**60,232**	**−1.7**	**984,638**	**949,574**	**−3.6**
Dyeing and cleaning	**398**	**12,602**	**12,159**	**−3.5**	**233,761**	**219,200**	**−6.2**
Building construction	**10,462**	**88,062**	**86,300**	**−2.0**	**2,264,242**	**2,181,839**	**−3.6**
Total	**64,762**	**4,147,771**	**4,167,215**	**+.5**	**79,777,148**	**79,002,459**	**−1.0**

[1] Weighted per cent of change for the combined 89 manufacturing industries, wherein the proper allowance is made for the relative importance of the several industries so that the figures represent all establishments of the country in the 89 industries surveyed, repeated from Table 1, manufacturing industries; the remaining per cents of change, including total, are unweighted.

[2] The amount of pay roll given represents cash payments only; the additional value of board, room, and tips can not be computed.

Data are not yet available concerning railroad employment for August, 1932. (See section "Class I steam railroads" for latest figures reported.)

Per capita weekly earnings in August, 1932, for each of the 16 industrial groups included in the bureau's monthly trend-of-employment survey, together with the per cents of change in August, 1932,

as compared with July, 1932, and August, 1931, are given in the table following. These per capita weekly earnings must not be confused with full-time weekly rates of wages; they are per capita weekly earnings computed by dividing the total amount of pay roll for the week by the total number of employees (part-time as well as full-time workers).

PER CAPITA WEEKLY EARNINGS IN AUGUST, 1932, IN 16 INDUSTRIAL GROUPS AND COMPARISON WITH JULY, 1932, AND AUGUST, 1931

Industrial group	Per capita weekly earnings in August, 1932	Per cent of change August, 1932, compared with—	
		July, 1932	August, 1931
Manufacturing	$16.93	−1.2	−22.7
Coal mining:			
Anthracite	24.46	+8.4	+.4
Bituminous	11.85	+6.7	−32.4
Metalliferous mining	17.97	+.7	−19.9
Quarrying and nonmetallic mining	15.69	−1.1	−27.4
Crude petroleum producing	28.07	−7.0	−17.2
Public utilities:			
Telephone and telegraph	27.10	+.4	−5.8
Power and light	29.48	−1.5	−6.2
Electric-railroad and motor-bus operation and maintenance	26.97	−1.9	−12.2
Trade:			
Wholesale	27.01	−2.0	−12.9
Retail	20.30	−1.3	−14.9
Hotels (cash payments only) [1]	13.46	−2.5	−15.0
Canning and preserving	11.68	+1.7	−9.5
Laundries	15.77	−1.8	−13.6
Dyeing and cleaning	18.03	−2.8	−17.3
Building construction	25.28	−1.7	[2]
Total	[3] 18.82	[3] −1.4	[3] −17.3

[1] The additional value of board, room, and tips can not be computed.
[2] Data not available.
[3] Does not include building construction.

Employment in Selected Manufacturing Industries in August, 1932

Comparison of Employment and Earnings in August, 1932, with July, 1932, and August, 1931

EMPLOYMENT in manufacturing industries increased 1.4 per cent in August, 1932, as compared with July, 1932, and earnings increased 0.3 per cent over the month interval. Comparing August, 1932, with August, 1931, decreases of 21.3 per cent in employment and 39.2 per cent in earnings are shown over the 12-month period.

The per cents of change in employment and earnings in August, 1932, as compared with July, 1932, are based on returns made by 18,152 establishments in 89 of the principal manufacturing industries in the United States, having in August 2,503,348 employees whose earnings in one week were $42,392,331.

The index of employment in August, 1932, was 56.0 as compared with 55.2 in July, 1932, 57.5 in June, 1932, and 71.2 in August, 1931; the pay-roll index in August, 1932, was 36.3 as compared with 36.2 in July, 1932, 39.3 in June, 1932, and 59.7 in August, 1931. The 12-month average for 1926 equals 100.

In Table 1, which follows, are shown the number of identical establishments reporting in both July and August, 1932, in the 89 manufacturing industries, together with the total number of employees on the pay rolls of these establishments during the pay period ending nearest August 15, and the amount of their weekly earnings in August, the per cents of change over the month and year intervals, and the index numbers of employment and earnings in August, 1932.

The monthly per cents of change for each of the 89 separate industries are computed by direct comparison of the total number of employees and of the amount of weekly earnings reported in identical establishments for the two months considered. The per cents of change over the month interval in the several groups and in the total of the 89 manufacturing industries are computed from the index numbers of these groups, which are obtained by weighting the index numbers of the several industries in the groups by the number of employees or wages paid in the industries. The per cents of change over the year interval in the separate industries, in the groups, and in the totals are computed from the index numbers of employment and earnings.

TABLE 1.—COMPARISON OF EMPLOYMENT AND EARNINGS IN MANUFACTURING ESTABLISHMENTS IN JULY AND AUGUST, 1932, AND AUGUST, 1931

Industry	Establishments reporting in both July and August, 1932	Employment			Earnings			Index numbers August, 1932 (average 1926=100)	
		Number on pay roll August, 1932	Per cent of change		Amount of pay roll (1 week) August, 1932	Per cent of change		Employment	Earnings
			July to August, 1932	August, 1931, to August, 1932		July to August, 1932	August, 1931, to August, 1932		
Food and kindred products	**3,078**	**233,667**	**+1.5**	**−8.7**	**$4,944,062**	**−0.9**	**−22.0**	**80.6**	**66.2**
Slaughtering and meat packing	232	82,857	−.3	−3.6	1,703,456	−3.0	−21.6	85.0	67.8
Confectionery	326	30,706	+21.8	−3.4	431,408	+23.2	−20.6	71.5	53.3
Ice cream	394	13,545	−2.1	−12.4	366,829	−3.8	−24.2	81.6	66.4
Flour	440	16,061	−.9	−8.3	348,326	−1.4	−21.4	82.5	67.9
Baking	952	61,757	−1.1	−11.9	1,377,391	−1.8	−22.0	80.7	67.6
Sugar refining, cane	15	8,117	+.8	−9.4	213,184	−.7	−16.1	76.4	68.9
Beet sugar	52	4,138	+28.4	−.8	92,749	+23.8	−18.0	52.3	41.0
Beverages	340	10,030	−6.3	−20.8	266,564	−8.9	−31.1	74.8	63.8
Butter	327	6,456	−1.1	−8.9	144,155	−1.9	−17.2	103.5	85.6
Textiles and their products	**3,029**	**539,902**	**+12.7**	**−20.0**	**6,810,425**	**+24.9**	**−40.1**	**62.3**	**40.1**
Cotton goods	694	193,956	+10.2	−18.4	1,911,919	+16.9	−40.3	61.2	38.4
Hosiery and knit goods	447	92,973	+7.6	−10.6	1,110,136	+14.4	−31.2	72.7	46.2
Silk goods	246	39,691	+29.7	−17.8	539,821	+42.7	−37.5	53.7	36.8
Woolen and worsted goods	253	54,416	+23.8	−18.7	863,952	+31.2	−38.1	70.4	50.4
Carpets and rugs	33	12,364	+6.1	−38.5	166,446	+3.8	−59.0	47.1	24.2
Dyeing and finishing textiles	147	29,609	+6.3	−19.0	523,500	+25.4	−38.9	68.1	47.3
Clothing, men's	354	54,488	+10.4	−20.8	746,872	+37.3	−45.1	62.3	35.7
Shirts and collars	107	12,317	−1.3	−30.0	127,945	+4.3	−46.2	50.7	31.8
Clothing, women's	369	20,309	+17.6	−33.3	375,391	+36.2	−45.0	53.4	34.9
Millinery	123	7,636	+32.5	−19.4	131,724	+51.4	−35.3	62.4	43.1
Corsets and allied garments	30	5,119	+1.9	−8.7	64,141	−2.5	−28.2	92.6	61.6
Cotton small wares	112	7,324	−1.1	−22.5	99,098	−1.1	−41.6	68.5	44.3
Hats, fur-felt	37	5,476	+14.5	−20.7	107,234	+35.1	−34.3	68.0	44.0
Men's furnishings	77	4,224	−.7	−30.1	42,246	−8.4	−56.2	46.3	26.0

TABLE 1.—COMPARISON OF EMPLOYMENT AND EARNINGS IN MANUFACTURING ESTABLISHMENTS IN JULY AND AUGUST, 1932, AND AUGUST, 1931—Continued

Industry	Establishments reporting in both July and August, 1932	Employment			Earnings			Index numbers August, 1932 (average 1926=100)	
		Number on pay roll August, 1932	Per cent of change		Amount of pay roll (1 week) August, 1932	Per cent of change			
			July to August, 1932	August, 1931, to August, 1932		July to August, 1932	August, 1931, to August, 1932	Employment	Earnings
Iron and steel and their products, not including machinery	**1,401**	**279,381**	**−1.6**	**−26.4**	**$3,716,782**	(1)	**−52.9**	**50.8**	**23.1**
Iron and steel	212	162,725	−2.5	−26.1	1,910,598	−0.9	−57.8	50.4	19.5
Cast-iron pipe	39	5,652	−4.3	−45.7	70,935	−7.6	−64.3	30.7	15.8
Structural and ornamental ironwork	187	15,401	−1.3	−38.1	266,850	−.1	−56.7	44.6	25.0
Hardware	115	20,116	−2.6	−25.2	142,439	−3.3	−52.7	46.4	20.9
Steam fittings and steam and hot-water heating apparatus	105	13,242	+1.9	−35.6	223,401	+1.2	−49.7	33.1	18.8
Stoves	160	13,947	+7.3	−27.2	226,257	+9.6	−45.2	43.7	23.8
Bolts, nuts, washers, and rivets	68	8,147	−3.6	−21.9	108,713	−7.8	−49.7	60.3	29.2
Cutlery (not including silver and plated cutlery) and edge tools	127	8,744	+1.3	−12.3	149,294	−2.3	−29.2	63.0	39.5
Forgings, iron and steel	62	5,239	−3.3	−22.7	75,375	−16.8	−50.3	53.0	25.1
Plumbers' supplies	69	6,823	−3.8	−21.3	115,139	+11.2	−45.3	59.0	34.4
Tin cans and other tinware	58	8,618	+.5	−13.8	167,426	+3.8	−21.5	75.5	45.2
Tools (not including edge tools, machine tools, files, or saws)	129	5,671	−8.1	−34.0	77,730	−8.7	−54.1	54.4	26.6
Wirework	70	5,056	+3.3	−16.6	82,625	+11.3	−37.9	90.2	59.5
Lumber and allied products	**1,598**	**114,467**	(1)	**−29.6**	**1,425,438**	**+1.0**	**−52.6**	**36.4**	**19.3**
Lumber—									
Sawmills	631	56,990	−.7	−28.6	635,612	−2.4	−53.4	34.5	17.3
Millwork	465	16,980	−.7	−34.2	248,232	−4.2	−54.3	34.6	19.9
Furniture	481	39,497	+2.2	−31.2	527,396	+13.4	−52.2	41.6	21.8
Turpentine and rosin	21	1,000	−7.1	−17.3	14,198	−6.2	−25.7	41.5	36.7
Leather and its manufactures	**497**	**131,726**	**+6.2**	**−12.3**	**2,077,372**	**+11.4**	**−31.7**	**75.2**	**49.8**
Leather	165	22,877	+2.1	−19.6	427,607	+5.0	−36.3	64.4	48.2
Boots and shoes	332	108,849	+7.2	−10.6	1,649,765	+13.5	−30.2	77.9	50.3
Paper and printing	**1,971**	**209,248**	**−1.4**	**−13.3**	**5,141,947**	**−2.3**	**−27.3**	**77.3**	**62.7**
Paper and pulp	419	76,610	+ (2)	−11.1	1,333,944	+1.8	−32.8	72.2	46.7
Paper boxes	315	19,367	+.1	−17.9	327,095	−.1	−32.3	66.6	52.8
Printing—									
Book and job	766	47,648	−4.0	−19.8	1,266,849	−5.2	−33.2	70.9	56.8
Newspapers and periodicals	471	65,623	−.9	−7.3	2,214,059	−2.5	−18.8	95.1	83.0
Chemicals and allied products	**1,028**	**128,722**	**−.6**	**−17.1**	**2,981,529**	**−.7**	**−29.3**	**67.6**	**56.1**
Chemicals	116	19,643	−1.0	−11.7	468,396	+ (2)	−25.4	81.3	58.6
Fertilizers	209	4,908	+12.5	−22.6	67,188	+5.1	−38.2	34.2	25.2
Petroleum refining	118	47,656	−2.1	−12.3	1,355,437	−.9	−20.3	62.8	56.2
Cottonseed, oil, cake, and meal	53	1,605	−2.3	+24.4	20,510	−.6	−4.1	27.5	28.1
Druggists' preparations	41	7,149	+3.2	−17.0	141,799	+2.4	−25.8	68.2	65.7
Explosives	22	2,678	+3.9	−28.7	49,516	+1.8	−47.3	69.2	43.6
Paints and varnishes	360	14,969	−4.3	−15.9	306,850	−8.1	−34.5	66.0	48.7
Rayon	22	18,014	−.1	−41.5	294,656	+4.6	−53.0	92.8	74.5
Soap	87	12,100	+.8	−5.3	277,177	−1.4	−20.9	93.9	81.5
Stone, clay, and glass products	**1,327**	**81,782**	**+1.2**	**−33.2**	**1,324,153**	**+2.8**	**−49.9**	**42.3**	**25.5**
Cement	124	12,968	−6.3	−38.0	237,632	−3.2	−55.7	38.0	23.4
Brick, tile, and terra cotta	667	19,857	+1.9	−38.7	244,364	+4.4	−57.8	29.9	13.7
Pottery	122	12,854	+7.7	−29.6	176,290	+9.6	−50.3	52.0	26.7
Glass	196	30,387	−3.4	−25.7	538,468	−2.8	−41.0	52.7	36.5
Marble, granite, slate, and other stone products	218	5,716	+9.9	−35.2	127,399	+10.1	−49.1	52.2	35.6

[1] No change.

[2] Less than one-tenth of 1 per cent.

TABLE 1.—COMPARISON OF EMPLOYMENT AND EARNINGS IN MANUFACTURING ESTABLISHMENTS IN JULY AND AUGUST, 1932, AND AUGUST, 1931—Continued

Industry	Establishments reporting in both July and August, 1932	Employment			Earnings			Index numbers August, 1932 (average 1926=100)	
		Number on pay roll August, 1932	Per cent of change		Amount of pay roll (1 week) August, 1932	Per cent of change		Employment	Earnings
			July to August, 1932	August, 1931, to August, 1932		July to August, 1932	August, 1931, to August, 1932		
Nonferrous metals and their products	**633**	**72,563**	**+2.7**	**−23.1**	**$1,160,119**	**+2.3**	**−42.5**	**50.2**	**30.6**
Stamped and enameled ware	91	12,397	+.6	−18.8	192,698	+2.3	−39.0	57.0	34.6
Brass, bronze, and copper products	206	26,197	−1.0	−23.2	409,248	−2.9	−44.4	49.3	27.8
Aluminum manufacturing	27	4,752	+4.1	−23.6	63,391	+7.9	−49.7	46.3	23.5
Clocks, time recording devices, and clock movements	22	3,383	+36.1	−28.2	43,447	+39.0	−46.8	41.6	26.4
Gas and electric fixtures, lamps, lanterns, and reflectors	54	4,316	+25.4	−31.5	85,796	+20.9	−44.1	60.6	41.4
Plated ware	54	6,969	+8.0	−19.2	122,288	+6.9	−38.1	57.5	34.0
Smelting and refining—copper, lead, and zinc	28	7,157	−7.1	−20.7	115,019	−10.0	−40.6	53.9	33.1
Jewelry	151	7,392	+13.9	−28.6	128,232	+12.1	−44.7	35.4	21.9
Tobacco manufactures	**254**	**55,619**	(1)	**−13.2**	**708,441**	**−3.8**	**−25.2**	**70.3**	**52.5**
Chewing and smoking tobacco and snuff	35	10,237	+1.1	+6.5	139,400	+2.8	−8.5	88.7	71.8
Cigars and cigarettes	219	45,382	−.3	−15.9	569,041	−4.9	−27.5	67.9	50.2
Transportation equipment	**419**	**242,720**	**−11.1**	**−22.7**	**4,564,670**	**−22.7**	**−35.1**	**50.5**	**32.0**
Automobiles	247	204,683	−12.2	−22.4	3,714,068	−24.9	−35.1	52.0	31.8
Aircraft	29	4,260	−5.4	−27.9	138,669	+1.0	−24.4	170.7	183.2
Cars, electric and steam railroad	35	4,507	−5.7	−31.1	79,500	−2.5	−37.3	18.6	11.1
Locomotives	11	2,402	−4.2	−39.8	52,098	−4.5	−49.8	15.9	11.6
Shipbuilding	97	26,868	−6.1	−19.6	580,335	−17.4	−35.4	71.5	52.6
Rubber products	**152**	**67,550**	**−2.1**	**−11.6**	**1,255,306**	**−8.4**	**−32.8**	**61.1**	**40.1**
Rubber tires and inner tubes	41	44,361	−4.3	−10.4	870,317	−13.7	−32.8	62.2	39.0
Rubber boots and shoes	7	5,566	+6.4	−13.8	87,606	+15.8	−35.5	53.8	33.4
Rubber goods, other than boots, shoes, tires, and inner tubes	104	17,623	−1.6	−12.8	297,383	−4.7	−31.9	76.2	47.7
Machinery, not including transportation equipment	**1,833**	**258,648**	**−4.4**	**−31.7**	**4,340,768**	**−6.2**	**−50.3**	**45.2**	**25.7**
Agricultural implements	76	5,210	+9.6	−30.7	80,697	+10.7	−35.4	21.7	15.5
Electrical machinery, apparatus, and supplies	291	91,467	−3.6	−30.6	1,553,235	−9.6	−51.6	53.5	33.4
Engines, turbines, tractors, and water wheels	85	15,029	−5.4	−35.1	281,360	−3.7	−47.1	39.4	23.1
Cash registers, adding machines, and calculating machines	45	13,130	−11.8	−23.2	306,555	−3.9	−33.7	62.1	45.1
Foundry and machine-shop products	1,092	96,376	−5.6	−30.0	1,487,906	−6.2	−49.4	42.8	21.9
Machine tools	151	9,804	−7.0	−47.3	177,898	−5.6	−61.7	28.6	16.9
Textile machinery and parts	35	5,630	+18.9	−33.8	90,867	+34.0	−52.9	49.3	28.9
Typewriters and supplies	18	6,297	−28.8	−46.7	88,175	−25.0	−60.2	40.7	21.7
Radio	40	15,705	+.9	−36.4	274,075	−6.1	−51.6	63.1	44.9
Railroad repair shops	**932**	**87,353**	**−4.9**	**−24.3**	**1,941,319**	**−3.5**	**−40.2**	**44.8**	**33.0**
Electric railroad	403	21,141	−2.1	−11.1	544,780	−4.3	−22.0	66.7	54.6
Steam railroad	529	66,212	−5.3	−25.7	1,396,539	−3.2	−42.1	43.1	31.3
Total, 89 industries	**18,152**	**2,503,348**	**+1.4**	**−21.3**	**42,392,331**	**+.3**	**−39.2**	**56.0**	**36.3**

[1] No change.

Per Capita Earnings in Manufacturing Industries

PER capita weekly earnings in August, 1932, for each of the 89 manufacturing industries surveyed by the Bureau of Labor Statistics, together with the per cent of change in August, 1932, as compared with July, 1932, and August, 1931, are shown in Table 2.

These earnings must not be confused with full-time weekly rates of wages. They are per capita weekly earnings, computed by dividing the total amount of pay roll for the week by the total number of employees (part-time as well as full-time workers).

TABLE 2.—PER CAPITA WEEKLY EARNINGS IN **MANUFACTURING** INDUSTRIES IN AUGUST, 1932, AND COMPARISON WITH JULY, 1932, AND AUGUST, 1931

Industry	Per capita weekly earnings in August, 1932	Per cent of change compared with—	
		July, 1932	August, 1931
Food and kindred products:			
Slaughtering and meat packing	$20.56	−2.7	−18.6
Confectionery	14.05	+1.2	−17.9
Ice cream	27.08	−1.7	−13.4
Flour	21.69	−.5	−14.1
Baking	22.30	−.8	−11.4
Sugar refining, cane	26.26	−1.5	−7.2
Beet sugar	22.41	−3.6	−17.5
Beverages	26.58	−2.8	−12.1
Butter	22.33	−.8	−9.1
Textiles and their products:			
Cotton goods	9.86	+6.1	−26.7
Hosiery and knit goods	11.94	+6.3	−23.2
Silk goods	13.60	+10.0	−24.4
Woolen and worsted goods	15.88	+6.0	−23.9
Carpets and rugs	13.46	−2.2	−33.6
Dyeing and finishing textiles	17.68	+17.9	−24.4
Clothing, men's	13.71	+24.4	−30.4
Shirts and collars	10.39	+5.7	−22.6
Clothing, women's	18.48	+15.8	−17.6
Millinery	17.25	+14.3	−19.6
Corsets and allied garments	12.53	−4.4	−21.5
Cotton small wares	13.53	(1)	−24.8
Hats, fur-felt	19.58	+17.9	−17.0
Men's furnishings	10.00	−7.8	−37.6
Iron and steel and their products, not including machinery:			
Iron and steel	11.74	+1.6	−43.0
Cast-iron pipe	12.55	−3.5	−34.0
Structural and ornamental ironwork	17.33	+1.2	−30.2
Hardware	12.05	−.7	−36.9
Steam fittings and steam and hot-water heating apparatus	16.87	−.7	−22.2
Stoves	16.22	+2.1	−25.1
Bolts, nuts, washers, and rivets	13.34	−4.3	−35.6
Cutlery (not including silver and plated cutlery) and edge tools	17.07	−3.6	−19.1
Forgings, iron and steel	14.39	−14.0	−35.6
Plumbers' supplies	16.88	+15.6	−30.6
Tin cans and other tinware	19.43	+3.3	−9.0
Tools (not including edge tools, machine tools, files, or saws)	13.71	−.7	−30.5
Wirework	16.34	+7.7	−25.7
Lumber and allied products:			
Lumber—			
Sawmills	11.15	−1.8	−34.4
Millwork	14.62	−3.4	−30.3
Furniture	13.35	+11.0	−30.3
Turpentine and rosin	14.20	+1.1	−9.9
Leather and its manufactures:			
Leather	18.69	+2.9	−20.9
Boots and shoes	15.16	+5.9	−21.8
Paper and printing:			
Paper and pulp	17.41	+1.8	−24.2
Paper boxes	16.89	−.2	−17.5
Printing—			
Book and job	26.59	−1.2	−16.7
Newspapers and periodicals	33.74	−1.6	−12.3

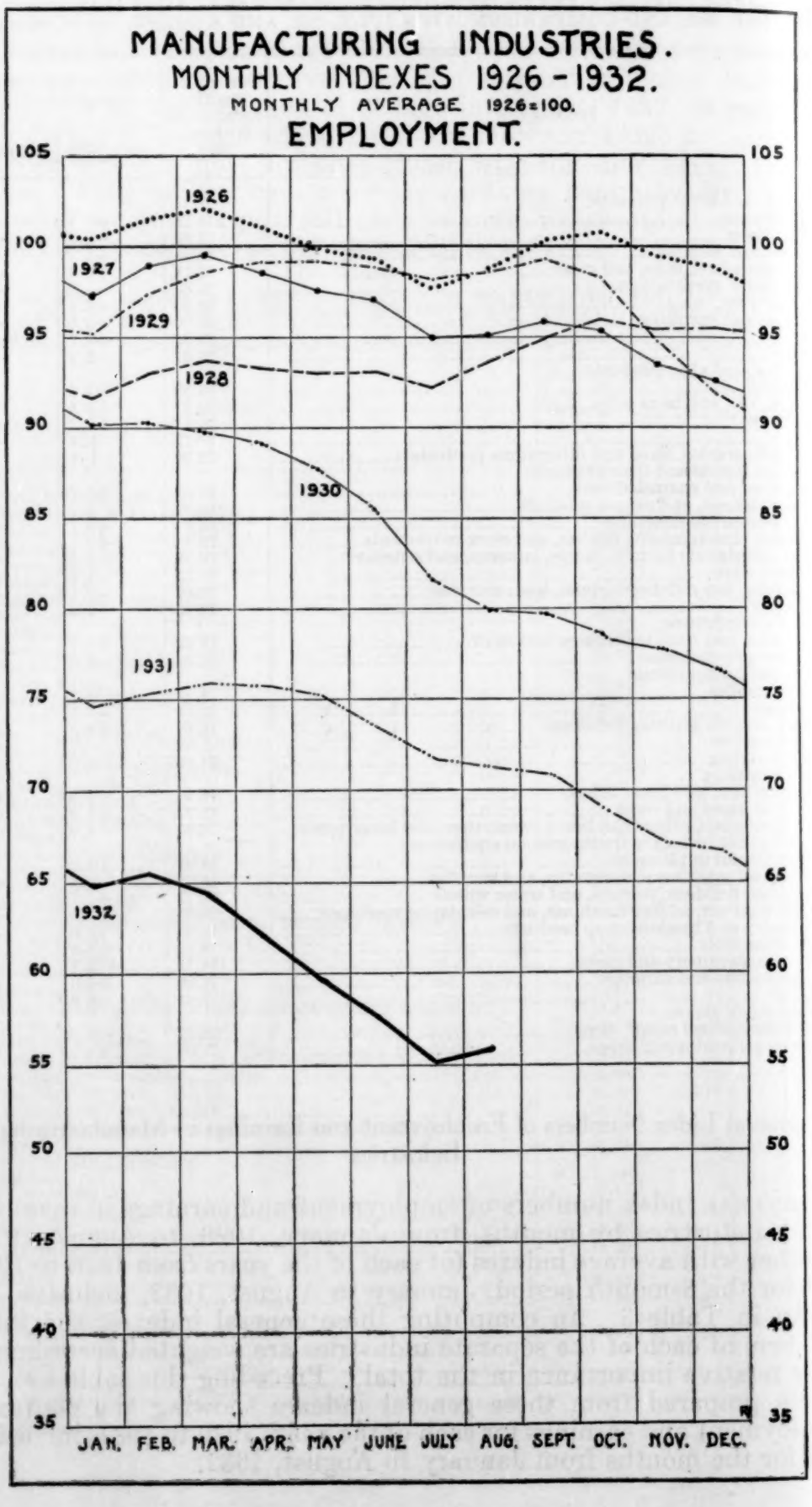
[1] No change.

TABLE 2.—PER CAPITA WEEKLY EARNINGS IN MANUFACTURING INDUSTRIES IN AUGUST, 1932, AND COMPARISON WITH JULY, 1932, AND AUGUST, 1931—Continued

Industry	Per capita weekly earnings in August, 1932	Per cent of change compared with—	
		July, 1932	August, 1931
Chemicals and allied products:			
Chemicals	$23.85	+1.1	−15.3
Fertilizers	13.69	−6.6	−20.3
Petroleum refining	28.44	+1.2	−9.1
Cottonseed oil, cake, and meal	12.78	+1.8	−22.6
Druggists' preparations	19.83	−.8	−10.6
Explosives	18.49	−2.0	−26.2
Paints and varnishes	20.50	−4.0	−22.2
Rayon	16.36	+4.7	−19.8
Soap	22.91	−2.2	−16.6
Stone, clay, and glass products:			
Cement	18.32	+3.3	−28.4
Brick, tile, and terra cotta	12.31	+2.6	−31.1
Pottery	13.71	+1.7	−29.3
Glass	17.72	+.6	−20.8
Marble, granite, slate, and other stone products	22.29	+.2	−21.7
Nonferrous metals and their products:			
Stamped and enameled ware	15.54	+1.7	−24.9
Brass, bronze, and copper products	15.62	−1.9	−27.6
Aluminum manufactures	13.34	+3.7	−34.1
Clocks, time-recording devices, and clock movements	12.84	+2.1	−25.9
Gas and electric fixtures, lamps, lanterns, and reflectors	19.88	−3.5	−18.2
Plated ware	17.55	−1.0	−23.4
Smelting and refining—copper, lead, and zinc	16.07	−3.1	−25.0
Jewelry	17.35	−1.5	−22.4
Tobacco manufactures:			
Chewing and smoking tobacco and snuff	13.62	+1.7	−13.9
Cigars and cigarettes	12.54	−4.6	−13.8
Transportation equipment:			
Automobiles	18.15	−14.5	−16.4
Aircraft	32.55	+6.7	+4.9
Cars, electric and steam railroad	17.64	+3.3	−8.6
Locomotives	21.69	−.3	−17.0
Shipbuilding	21.60	−12.0	−20.0
Rubber products:			
Rubber tires and inner tubes	19.62	−9.8	−25.2
Rubber boots and shoes	15.74	+8.9	−25.4
Rubber goods, other than boots, shoes, tires, and inner tubes	16.87	−3.2	−21.7
Machinery, not including transportation equipment:			
Agricultural implements	15.49	+1.0	−6.6
Electrical machinery, apparatus, and supplies	16.98	−6.2	−29.8
Engines, turbines, tractors, and water wheels	18.72	+1.7	−.1
Cash registers, adding machines, and calculating machines	23.35	+9.0	−13.6
Foundry and machine-shop products	15.44	−.6	−27.6
Machine tools	18.15	+1.6	−27.2
Textile machinery and parts	16.14	+12.7	−28.9
Typewriters and supplies	14.00	+5.3	−25.3
Radio	17.45	−6.9	−24.0
Railroad repair shops:			
Electric-railroad repair shops	25.77	−2.2	−12.3
Steam-railroad repair shops	21.09	+2.2	−22.0

General Index Numbers of Employment and Earnings in Manufacturing Industries

GENERAL index numbers of employment and earnings in manufacturing industries by months, from January, 1926, to August, 1932, together with average indexes for each of the years from 1926 to 1931, and for the 8-month period, January to August, 1932, inclusive, are shown in Table 3. In computing these general indexes, the index numbers of each of the separate industries are weighted according to their relative importance in the total. Preceding this table are two charts prepared from these general indexes showing the course of employment and earnings for each of the years 1926 to 1931, inclusive, and for the months from January to August, 1932.


MANUFACTURING INDUSTRIES.
MONTHLY INDEXES 1926-1932.
MONTHLY AVERAGE 1926=100.
EMPLOYMENT.
105
100
95
90
85
80
75
70
65
60
55
50
45
40
35
1926
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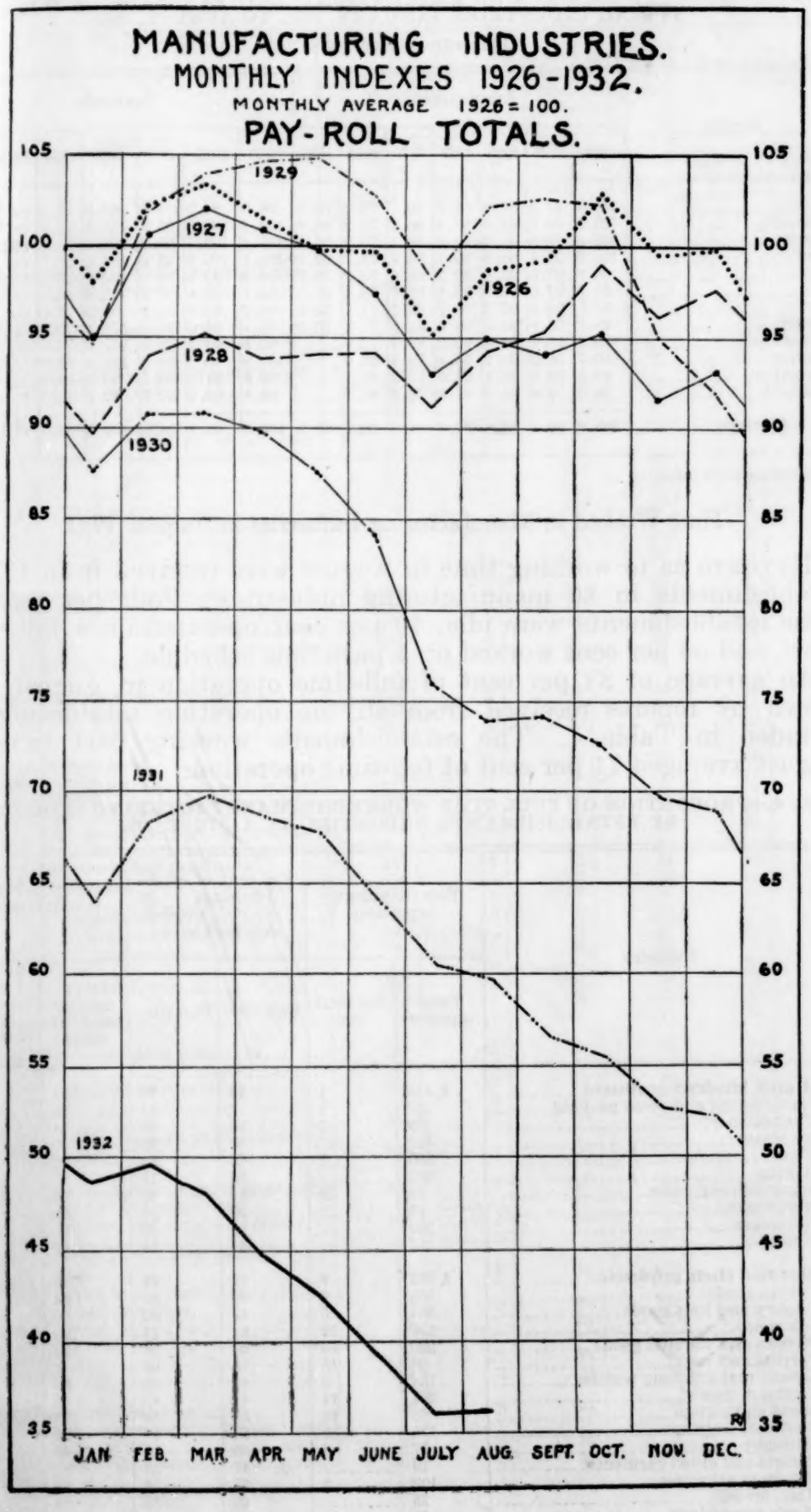
1932
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.


MANUFACTURING INDUSTRIES.
MONTHLY INDEXES 1926-1932.
MONTHLY AVERAGE 1926 = 100.
PAY-ROLL TOTALS.
105
100
95
90
85
80
75
70
65
60
55
50
45
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35
1929
1927
1926
1928
1930
1931
1932
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.

TABLE 3.—GENERAL INDEXES OF EMPLOYMENT AND EARNINGS IN MANUFACTURING INDUSTRIES, JANUARY, 1926, TO AUGUST, 1932

[12-month average, 1926=100]

Month	Employment							Earnings						
	1926	1927	1928	1929	1930	1931	1932	1926	1927	1928	1929	1930	1931	1932
January	100.4	97.3	91.6	95.2	90.7	74.6	64.8	98.0	94.9	89.6	95.5	88.1	63.7	48.6
February	101.5	99.0	93.0	97.4	90.9	75.3	65.6	102.2	100.6	93.9	101.8	91.3	68.1	49.6
March	102.0	99.5	93.7	98.6	90.5	75.9	64.5	103.4	102.0	95.2	103.9	91.6	69.6	48.2
April	101.0	98.6	93.3	99.1	89.9	75.7	62.2	101.5	100.8	93.8	104.6	90.7	68.5	44.7
May	99.8	97.6	93.0	99.2	88.6	75.2	59.7	99.8	99.8	94.1	104.8	88.6	67.7	42.5
June	99.3	97.0	93.1	98.8	86.5	73.4	57.5	99.7	97.4	94.2	102.8	85.2	63.8	39.3
July	97.7	95.0	92.2	98.2	82.7	71.7	55.2	95.2	93.0	91.2	98.2	77.0	60.3	36.2
August	98.7	95.1	93.6	98.6	81.0	71.2	56.0	98.7	95.0	94.2	102.1	75.0	59.7	36.3
September	100.3	95.8	95.0	99.3	80.9	70.9	-----	99.3	94.1	95.4	102.6	75.4	56.7	-----
October	100.7	95.3	95.9	98.4	79.9	68.9	-----	102.9	95.2	99.0	102.4	74.0	55.3	-----
November	99.5	93.5	95.4	95.0	77.9	67.1	-----	99.6	91.6	96.1	95.4	69.6	52.5	-----
December	98.9	92.6	95.5	92.3	76.6	66.7	-----	99.8	93.2	97.7	92.4	68.8	52.2	-----
Average	**100.0**	**96.4**	**93.8**	**97.5**	**84.7**	**72.2**	[1] **60.7**	**100.0**	**96.5**	**94.5**	**100.5**	**81.3**	**61.5**	[1] **43.2**

[1] Average for 8 months.

Time Worked in Manufacturing Industries in August, 1932

REPORTS as to working time in August were received from 13,255 establishments in 89 manufacturing industries. Four per cent of these establishments were idle, 40 per cent operated on a full-time basis, and 56 per cent worked on a part-time schedule.

An average of 83 per cent of full-time operation in August was shown by reports received from all the operating establishments included in Table 4. The establishments working part time in August averaged 71 per cent of full-time operation.

TABLE 4.—PROPORTION OF FULL TIME WORKED IN MANUFACTURING INDUSTRIES BY ESTABLISHMENTS REPORTING IN AUGUST, 1932

Industry	Establishments reporting		Per cent of establishments in which employees worked—		Average per cent of full time reported by—	
	Total number	Per cent idle	Full time	Part time	All operating establishments	Establishments operating part time
Food and kindred products	**2,375**	**1**	**73**	**26**	**94**	**78**
Slaughtering and meat packing	167	1	72	27	96	87
Confectionery	239	3	30	68	81	73
Ice cream	319	-----	80	20	97	84
Flour	390	1	69	30	92	74
Baking	633	-----	85	15	97	78
Sugar refining, cane	13	23	31	46	90	83
Beet sugar	49	-----	90	10	99	88
Beverages	292	-----	74	26	95	79
Butter	273	-----	84	16	97	85
Textiles and their products	**2,263**	**9**	**47**	**44**	**88**	**74**
Cotton goods	633	9	39	52	84	71
Hosiery and knit goods	361	6	55	40	90	76
Silk goods	196	12	64	24	93	74
Woolen and worsted goods	220	10	64	26	92	74
Carpets and rugs	26	15	15	69	73	67
Dyeing and finishing textiles	134	2	42	56	86	75
Clothing, men's	214	14	44	42	89	77
Shirts and collars	68	15	37	49	90	82
Clothing, women's	135	19	53	27	92	77
Millinery	77	6	56	38	93	83
Corsets and allied garments	19	-----	47	53	87	74
Cotton small wares	102	2	25	74	82	75
Hats, fur-felt	25	-----	48	52	85	70
Men's furnishings	53	11	28	60	80	71

TABLE 4.—PROPORTION OF FULL TIME WORKED IN MANUFACTURING INDUSTRIES BY ESTABLISHMENTS REPORTING IN AUGUST, 1932—Continued

Industry	Establishments reporting		Per cent of establishments in which employees worked—		Average per cent of full time reported by—	
	Total number	Per cent idle	Full time	Part time	All operating establishments	Establishments operating part time
Iron and steel and their products, not including machinery	**1,030**	**5**	**12**	**83**	**67**	**62**
Iron and steel	158	11	8	80	57	53
Cast-iron pipe	35	11	9	80	54	49
Structural and ornamental ironwork	130	4	8	88	73	70
Hardware	55	2	4	95	64	62
Steam fittings and steam and hot-water heating apparatus	85	6	2	92	58	57
Stoves	114	5	11	84	69	65
Bolts, nuts, washers, and rivets	60	----	7	93	65	63
Cutlery (not including silver and plated cutlery) and edge tools	99	2	23	75	72	63
Forgings, iron and steel	34	----	15	85	64	57
Plumbers' supplies	54	6	13	81	73	69
Tin cans and other tinware	49	4	43	53	87	77
Tools (not including edge tools, machine tools, files, or saws)	106	5	16	79	68	61
Wirework	51	----	16	84	74	69
Lumber and allied products	**1,073**	**7**	**22**	**72**	**74**	**66**
Lumber, sawmills	438	9	14	77	70	64
Lumber, millwork	285	4	20	76	75	68
Furniture	532	6	32	62	79	67
Turpentine and rosin	18	11	28	61	87	80
Leather and its manufactures	**376**	**2**	**32**	**66**	**84**	**76**
Leather	127	2	39	59	85	76
Boots and shoes	249	1	29	69	83	76
Paper and printing	**1,546**	**1**	**34**	**64**	**83**	**75**
Paper and pulp	320	4	28	68	77	68
Paper boxes	256	(1)	9	91	75	73
Printing, book and job	601	(1)	20	79	81	76
Printing, newspapers and periodicals	369	----	81	19	98	89
Chemicals and allied products	**762**	**2**	**53**	**44**	**90**	**79**
Chemicals	79	5	66	29	95	85
Fertilizers	148	5	61	34	93	81
Petroleum refining	63	5	79	16	98	88
Cottonseed oil, cake, and meal	42	----	45	55	80	63
Druggists' preparations	27	----	37	63	91	85
Explosives	11	9	----	91	83	83
Paints and varnishes	307	1	45	55	87	77
Rayon	12	17	58	25	90	67
Soap	73	----	56	44	93	85
Stone, clay, and glass products	**767**	**14**	**34**	**53**	**79**	**66**
Cement	71	10	79	11	97	73
Brick, tile, and terra cotta	291	22	19	59	72	63
Pottery	93	6	15	78	67	61
Glass	131	12	66	22	93	72
Marble, granite, slate, and other stone products	181	7	26	67	79	70
Nonferrous metals and their products	**477**	**2**	**17**	**81**	**73**	**68**
Stamped and enameled ware	80	----	11	89	75	72
Brass, bronze, and copper products	135	3	16	81	73	68
Aluminum manufactures	14	----	7	93	67	64
Clocks, time-recording devices, and clock movements	19	5	16	79	64	56
Gas and electric fixtures, lamps, lanterns, and reflectors	43	2	16	81	76	71
Plated ware	46	----	13	87	72	68
Smelting and refining—copper, lead, and zinc	19	16	32	53	82	72
Jewelry	121	2	24	74	73	64
Tobacco manufactures	**199**	**5**	**21**	**74**	**79**	**73**
Chewing and smoking tobacco and snuff	31	3	26	71	81	74
Cigars and cigarettes	168	5	20	74	79	73

[1] Less than one-half of 1 per cent.

TABLE 4.—PROPORTION OF FULL TIME WORKED IN **MANUFACTURING** INDUSTRIES BY ESTABLISHMENTS REPORTING IN AUGUST, 1932—Continued

Industry	Establishments reporting		Per cent of establishments in which employees worked—		Average per cent of full time reported by—	
	Total number	Per cent idle	Full time	Part time	All operating establishments	Establishments operating part time
Transportation equipment	**275**	**5**	**27**	**67**	**78**	**70**
Automobiles	150	5	13	82	70	66
Aircraft	24	8	50	42	92	83
Cars, electric and steam railroad	25	4	20	76	76	70
Locomotives	8	----	13	88	79	76
Shipbuilding	68	6	56	38	93	82
Rubber products	**120**	**1**	**28**	**71**	**82**	**75**
Rubber tires and inner tubes	27	----	26	74	81	74
Rubber boots and shoes	5	----	----	100	90	90
Rubber goods, other than boots, shoes, tires, and inner tubes	88	1	31	68	82	73
Machinery, not including transportation equipment	**1,231**	**3**	**19**	**78**	**72**	**66**
Agricultural implements	61	8	31	61	81	71
Electrical machinery, apparatus, and supplies	175	2	14	84	74	70
Engines, turbines, tractors, and water wheels	59	----	20	80	75	69
Cash registers, adding machines, and calculating machines	34	6	35	59	83	73
Foundry and machine-shop products	727	3	18	79	70	63
Machine tools	114	4	10	86	73	70
Textile machinery and parts	29	3	21	76	76	70
Typewriters and supplies	9	----	33	67	74	61
Radio	23	----	48	52	88	78
Railroad repair shops	**761**	**1**	**46**	**53**	**90**	**80**
Electric-railroad repair shops	343	----	66	34	94	83
Steam-railroad repair shops	418	2	30	68	85	79
Total, 89 industries	**13,255**	**4**	**40**	**56**	**83**	**71**

Employment in Nonmanufacturing Industries in August, 1932

IN THE following table are presented employment and pay-roll data for 14 groups of nonmanufacturing industries, the totals of which also appear in the summary table of employment and earnings.

TABLE 1.—COMPARISON OF EMPLOYMENT AND EARNINGS IN **NONMANUFACTURING** ESTABLISHMENTS IN JULY AND AUGUST, 1932, AND AUGUST, 1931

Industrial group	Establishments reporting in both July and August, 1932	Employment			Pay roll totals			Index numbers (average 1929=100)	
		Number on pay roll, August, 1932	Per cent of change		Amount of pay roll (1 week) August, 1932	Per cent of change		Employment	Pay-roll totals
			July to August, 1932	August, 1931, to August, 1932		July to August, 1932	August, 1931, to August, 1932		
Anthracite mining	160	67,212	+10.5	−26.9	$1,644,300	+19.8	−26.6	49.2	41.4
Bituminous coal mining	1,145	151,795	+1.3	−22.9	1,799,415	+8.0	−47.8	59.4	26.4
Metalliferous mining	256	18,310	−3.1	−48.7	328,982	−2.5	−59.0	28.6	16.5
Quarrying and nonmetallic mining	628	23,853	+3.4	−25.8	374,357	+2.3	−46.1	51.1	29.7
Crude petroleum producing	273	21,793	+3.6	−8.0	611,769	−3.7	−23.8	57.4	42.9
Telephone and telegraph	8,049	274,060	−1.2	−9.1	7,427,487	−0.7	−14.3	78.1	79.1
Power and light	3,494	219,521	−1.0	−15.0	6,471,438	−2.5	−20.3	81.5	76.7
Electric-railroad and motor-bus operation and maintenance	501	136,103	−2.0	−12.6	3,671,093	−3.9	−23.3	74.1	62.8
Wholesale trade	2,688	70,494	−0.2	−11.7	1,903,709	−2.3	−23.0	76.4	63.2
Retail trade	14,057	311,404	−2.7	−11.2	6,320,404	−4.0	−24.4	72.6	60.7
Hotels	2,580	138,361	−1.1	−16.4	1,862,502	−3.5	−28.9	77.6	59.6
Canning and preserving	913	72,270	+35.6	−30.7	844,059	+38.0	−37.3	99.0	65.6
Laundries	1,006	60,232	−1.7	−12.5	949,574	−3.6	−24.5	78.9	63.9
Dyeing and cleaning	398	12,159	−3.5	−15.0	219,200	−6.2	−29.6	79.5	56.3

Indexes of Employment and Earnings for Nonmanufacturing Industries

INDEX numbers of employment and earnings for 14 nonmanufacturing industries are presented in the following table. These index numbers show the variation in employment and earnings in these groups, by months, from January, 1929, to August, 1932, with the exception of the laundries and the dyeing and cleaning groups, for which information over the entire period is not available. The bureau recently secured data concerning employment and earnings for the index base year 1929 from establishments in the laundries and the dyeing and cleaning groups, and has computed index numbers for these two groups, which now appear in this tabulation. The monthly collection of trend-of-employment statistics in these two groups did not begin until the latter months of 1930 and, therefore, indexes for each month of the entire period are not available.

TABLE 2.—INDEXES OF EMPLOYMENT AND EARNINGS FOR **NONMANUFACTURING** INDUSTRIES, JANUARY TO DECEMBER, 1929, 1930, AND 1931, AND JANUARY TO AUGUST, 1932

[12-month average, 1929=100]

Month	Anthracite mining								Bituminous coal mining							
	Employment				Earnings				Employment				Earnings			
	1929	1930	1931	1932	1929	1930	1931	1932	1929	1930	1931	1932	1929	1930	1931	1932
January	105.7	102.1	90.6	76.2	100.7	105.8	89.3	61.5	106.4	102.5	93.9	80.8	106.1	101.4	73.3	47.0
February	106.0	106.9	89.5	71.2	122.1	121.5	101.9	57.3	107.7	102.4	91.5	77.4	116.6	102.1	68.3	47.0
March	98.0	82.6	82.0	73.7	90.8	78.5	71.3	61.2	106.8	98.6	88.8	75.2	108.6	86.4	65.2	46.8
April	100.7	84.1	85.2	70.1	88.3	75.0	75.2	72.0	100.2	94.4	85.9	65.5	89.2	81.7	58.6	33.9
May	103.7	93.8	80.3	66.9	99.0	98.8	76.1	58.0	96.6	90.4	82.4	62.6	91.9	77.5	54.4	30.7
June	92.9	90.8	76.1	53.0	80.7	94.3	66.7	37.4	94.7	88.4	78.4	60.5	90.0	75.6	52.4	27.3
July	83.2	91.6	65.1	44.5	64.7	84.0	53.7	34.5	94.1	88.0	76.4	58.6	85.6	68.9	50.4	24.4
August	91.1	80.2	67.3	49.2	78.4	78.8	56.4	41.4	95.7	89.2	77.0	59.4	92.8	71.1	50.6	26.4
September	101.9	93.8	80.0	-----	103.8	91.6	64.9	-----	97.2	90.5	80.4	-----	98.6	74.9	53.6	-----
October	106.1	99.0	86.8	-----	133.9	117.2	91.1	-----	98.8	91.8	81.3	-----	106.8	79.4	56.2	-----
November	104.0	97.2	83.5	-----	100.5	98.0	79.5	-----	101.0	92.5	81.1	-----	106.0	79.1	54.6	-----
December	107.1	99.1	79.8	-----	137.2	100.0	78.4	-----	101.4	92.5	81.2	-----	108.2	77.7	52.3	-----
Average	100.0	93.4	80.5	[1] 63.1	100.0	95.3	75.4	[1] 52.9	100.0	93.4	83.2	[1] 67.5	100.0	81.3	57.5	[1] 35.4
	Metalliferous mining								Quarrying and nonmetallic mining							
January	93.1	95.7	68.3	49.3	88.0	92.7	55.0	29.7	91.6	79.6	64.4	48.9	85.9	71.9	50.4	30.2
February	94.6	92.3	65.3	46.9	91.8	92.5	54.6	27.8	91.9	79.8	66.6	47.4	88.9	73.5	54.4	29.6
March	97.0	90.9	63.5	45.0	99.1	90.8	52.8	26.5	96.0	83.0	70.0	46.0	95.0	80.0	58.2	28.7
April	100.6	89.3	63.9	43.3	104.6	88.3	51.4	25.0	99.6	87.4	76.1	48.6	100.5	85.4	62.6	30.0
May	100.8	87.5	62.4	38.3	104.6	85.6	49.3	23.8	104.1	90.8	75.0	50.6	107.1	90.2	62.3	32.3
June	103.8	84.6	60.0	32.2	105.6	81.6	46.1	20.1	106.6	90.3	72.3	49.5	110.5	90.9	60.1	30.0
July	101.5	80.5	56.2	29.5	99.0	71.9	41.3	16.9	104.7	89.9	71.0	49.5	104.7	85.5	57.3	29.1
August	103.2	79.0	55.8	28.6	100.1	71.0	40.2	16.5	106.7	89.3	68.9	51.1	110.3	85.8	55.1	29.7
September	102.1	78.1	55.5	-----	102.0	69.9	40.0	-----	106.6	87.7	66.6	-----	109.8	82.5	51.2	-----
October	101.9	77.2	53.8	-----	103.1	68.6	37.4	-----	103.6	84.7	64.5	-----	105.8	79.3	48.7	-----
November	103.0	72.8	52.8	-----	102.2	63.4	35.1	-----	98.6	78.3	59.3	-----	96.0	66.8	43.3	-----
December	98.5	70.1	51.2	-----	99.7	59.9	34.3	-----	90.1	70.2	53.9	-----	85.4	59.9	36.9	-----
Average	100.0	83.2	59.1	[1] 39.1	100.0	78.0	44.8	[1] 23.3	100.0	84.3	67.4	[1] 49.0	100.0	79.3	53.4	[1] 30.0
	Crude petroleum producing								Telephone and telegraph							
January	90.0	92.7	74.8	54.9	93.1	94.0	71.5	46.5	94.3	101.6	90.5	83.0	94.5	105.1	96.3	89.1
February	90.4	90.8	73.2	54.4	99.0	88.6	70.0	46.9	95.3	100.2	89.2	82.0	93.0	101.9	94.8	89.6
March	89.6	89.3	72.2	51.4	97.4	91.3	73.2	43.2	96.5	99.4	88.6	81.7	98.7	105.8	97.9	88.2
April	97.6	86.8	69.8	54.9	96.7	86.6	66.3	44.5	97.8	98.9	88.1	81.2	98.3	103.4	95.0	83.4
May	93.9	89.8	67.8	54.5	92.4	85.4	64.7	47.1	100.4	99.7	87.4	80.6	99.4	103.2	94.1	82.8
June	104.1	90.2	65.0	54.2	99.4	87.1	62.7	44.8	101.5	99.8	86.9	79.9	100.0	103.4	95.0	82.1
July	106.0	89.9	65.3	55.4	100.7	88.5	59.2	44.6	102.6	100.0	86.6	79.1	104.1	106.6	93.3	79.6
August	113.2	87.7	62.4	57.4	104.7	86.0	56.3	42.9	103.7	98.8	85.9	78.1	101.8	102.5	92.3	79.1
September	108.9	85.0	61.2	-----	110.7	84.0	55.2	-----	102.5	96.8	85.0	-----	100.4	102.2	92.1	-----
October	107.9	85.2	60.4	-----	100.1	82.6	54.4	-----	101.9	94.5	84.1	-----	105.1	100.9	91.6	-----
November	101.1	83.6	57.6	-----	103.8	80.0	52.0	-----	101.9	93.0	83.5	-----	101.2	97.9	89.7	-----
December	97.0	77.4	58.2	-----	102.1	77.2	54.9	-----	101.8	91.6	83.1	-----	103.9	101.3	92.7	-----
Average	100.0	87.4	65.7	[1] 54.6	100.0	85.9	61.7	[1] 45.1	100.0	97.9	86.6	[1] 80.7	100.0	102.9	93.7	[1] 84.2

[1] Average for 8 months.

TABLE 2.—INDEXES OF EMPLOYMENT AND EARNINGS FOR NONMANUFACTURING INDUSTRIES, JANUARY TO DECEMBER, 1929, 1930, AND 1931, AND JANUARY TO AUGUST, 1932—Continued

Month	Power and light								Electric-railroad and motor-bus operation and maintenance [2]							
	Employment				Earnings				Employment				Earnings			
	1929	1930	1931	1932	1929	1930	1931	1932	1929	1930	1931	1932	1929	1930	1931	1932
January	92.9	99.6	99.2	89.3	91.7	99.7	98.6	88.4	99.7	97.1	86.9	79.5	98.7	97.8	85.6	74.3
February	92.6	98.8	97.8	87.2	91.8	100.4	99.7	86.0	99.1	95.1	86.6	78.9	97.6	95.7	87.1	73.6
March	92.8	99.7	96.7	85.5	94.5	102.1	102.4	85.4	97.0	94.4	86.4	77.6	98.0	95.4	88.1	72.4
April	95.9	100.7	97.1	84.8	95.5	102.6	97.6	82.4	98.5	95.2	86.8	78.0	99.5	97.1	86.6	70.7
May	98.4	103.4	97.6	84.0	98.1	104.5	98.7	84.2	100.4	95.2	85.9	76.9	101.0	96.0	85.1	71.2
June	100.7	104.6	97.2	83.2	100.4	107.8	98.3	80.5	101.2	94.8	85.3	76.5	101.7	97.0	84.8	69.2
July	103.2	105.9	96.7	82.3	102.3	106.7	97.4	78.7	102.2	95.3	85.6	75.6	101.9	95.6	83.3	65.3
August	105.4	106.4	95.9	81.5	103.8	106.6	96.2	76.7	102.2	92.9	84.8	74.1	102.0	92.1	81.9	62.8
September	105.5	105.2	94.7	-----	106.6	106.1	94.3	-----	101.4	91.8	84.0	-----	101.5	90.5	81.2	-----
October	105.7	104.8	92.7	-----	106.0	105.6	93.2	-----	100.5	91.0	82.7	-----	100.0	88.9	79.0	-----
November	104.7	103.4	91.3	-----	104.1	103.7	93.3	-----	99.4	89.3	81.5	-----	98.4	87.7	79.7	-----
December	102.5	103.2	90.3	-----	105.8	106.3	91.2	-----	98.3	88.8	79.9	-----	99.8	88.6	77.8	-----
Average	100.0	103.0	95.6	[1] 84.7	100.0	104.3	96.7	[1] 82.8	100.0	93.4	84.7	[1] 77.1	100.0	93.5	83.4	[1] 69.9
	Wholesale trade								Retail trade							
January	97.7	100.0	89.5	81.8	96.7	100.0	87.5	74.1	99.2	98.9	90.0	84.3	99.0	99.7	89.4	78.0
February	96.9	98.5	88.2	80.9	96.4	98.3	88.4	72.5	94.6	94.4	87.1	80.5	94.5	96.0	86.7	75.7
March	97.3	97.7	87.4	79.8	98.5	99.7	89.1	71.3	96.2	93.9	87.8	81.4	96.1	95.5	87.5	73 4
April	97.9	97.3	87.4	78.9	97.8	97.9	85.2	68.9	95.5	97.3	90.1	81.6	96.0	97.5	88.3	72.7
May	99.0	96.8	87.1	77.9	99.0	97.4	84.7	69.7	97.3	96.7	89.9	80.9	97.1	97.3	88.0	71.1
June	99.2	96.5	87.1	77.0	98.6	98.6	84.1	66.2	97.4	93.9	89.1	79.4	98.6	96.8	87.6	68.2
July	100.4	96.0	86.8	76.6	100.5	96.0	83.3	64.7	93.6	89.0	83.9	74.6	95.9	91.7	83.3	63.3
August	101.3	95.0	86.5	76.4	100.0	93.6	82.1	63.2	93.6	85.6	81.8	72.6	95.2	87.6	80.3	60.7
September	101.9	94.8	86.1	-----	103.3	93.6	81.4	-----	97.6	92.0	86.6	-----	99.2	92.4	83.5	-----
October	102.9	94.2	85.2	-----	102.7	92.9	79.9	-----	101.7	95.5	89.8	-----	102.6	95.1	84.6	-----
November	102.9	92.6	84.1	-----	101.9	91.0	79.7	-----	106.7	98.4	90.9	-----	105.2	96.8	85.4	-----
December	102.6	92.0	83.7	-----	104.7	91.3	77.8	-----	126.2	115.1	106.2	-----	120.6	107.7	94.1	-----
Average	100.0	96.0	86.6	[1] 78.7	100.0	95.9	83.6	[1] 68.8	100.0	95.9	89.4	[1] 79.4	100.0	96.2	86.6	[1] 70.1
	Hotels								Canning and preserving							
January	97.1	100.4	95.0	83.2	98.5	100.3	91.0	73.9	50.8	46.1	48.9	35.0	57.3	50.3	46.1	31.8
February	99.8	102.4	96.8	84.3	102.0	103.8	93.7	73.9	48.9	45.7	48.3	37.1	59.2	51.5	48.6	32.7
March	100.9	102.4	96.8	84.0	103.4	104.4	93.4	72.4	49.4	49.7	53.0	36.3	54.9	50.8	50.3	31.9
April	99.7	100.1	95.9	82.7	100.6	100.3	89.9	69.6	90.6	74.8	59.6	47.0	98.9	72.6	57.1	37.9
May	98.1	98.0	92.5	80.1	98.9	98.4	87.7	67.0	62.0	65.7	56.0	40.5	71.2	66.9	56.0	36.0
June	99.3	98.0	91.6	78.0	98.7	98.1	85.4	63.8	76.6	83.0	70.6	55.5	71.9	81.5	58.6	40.5
July	101.1	101.3	93.3	78.4	99.8	99.8	85.2	61.8	126.8	126.3	102.2	73.0	109.2	112.7	74.2	47.5
August	102.6	101.5	92.8	77.6	99.4	98.6	83.8	59.6	184.8	185.7	142.9	99.0	180.1	172.0	104.7	65.6
September	102.8	100.1	90.6	-----	100.2	97.1	81.9	-----	210.1	246.6	180.1	-----	207.9	214.8	129.4	-----
October	100.6	97.5	87.4	-----	100.2	95.5	79.7	-----	143.3	164.7	108.1	-----	134.5	140.0	77.6	-----
November	100.0	95.2	84.9	-----	99.8	93.6	77.1	-----	95.1	96.7	60.8	-----	91.6	82.9	48.1	-----
December	97.7	93.5	83.1	-----	98.9	91.5	75.4	-----	61.3	61.6	40.7	-----	63.4	57.4	36.9	-----
Average	100.0	99.2	91.7	[1] 81.0	100.0	98.5	85.4	[1] 67.8	100.0	103.9	80.9	[1] 52.9	100.0	96.1	65.6	[1] 40.5
	Laundries								Dyeing and cleaning							
January	-----	-----	90.5	84.7	-----	-----	86.6	76.4	-----	-----	88.9	82.1	-----	-----	77.7	65.8
February	-----	-----	90.0	82.9	-----	-----	85.6	73.3	-----	-----	87.4	80.5	-----	-----	75.1	62.2
March	-----	-----	89.5	82.0	-----	-----	85.6	71.6	-----	-----	88.0	80.6	-----	-----	75.6	61.7
April	-----	-----	90.5	82.0	-----	-----	86.8	71.4	-----	-----	95.7	83.3	-----	-----	86.3	65.9
May	-----	-----	90.3	81.4	-----	-----	86.5	70.6	-----	-----	96.7	84.5	-----	-----	86.6	67.3
June	-----	-----	91.0	81.0	-----	-----	87.1	68.6	-----	-----	99.0	85.1	-----	-----	89.1	65.8
July	-----	-----	91.8	80.3	-----	-----	87.4	66.3	-----	-----	98.6	82.4	-----	-----	86.2	60.0
August	-----	-----	90.2	78.9	-----	-----	84.6	63.9	-----	-----	93.5	79.5	-----	-----	80.0	56.3
September	-----	-----	89.3	-----	-----	-----	84.1	-----	-----	-----	95.3	-----	-----	-----	82.6	-----
October	-----	-----	88.1	-----	-----	-----	81.8	-----	-----	-----	94.2	-----	-----	-----	81.4	-----
November	-----	-----	86.2	-----	-----	-----	78.9	-----	-----	-----	90.1	-----	-----	-----	74.7	-----
December	-----	-----	85.3	-----	-----	-----	77.4	-----	-----	-----	84.9	-----	-----	-----	67.9	-----
Average	100.0	-----	89.4	[1] 81.7	100.0	-----	84.4	[1] 70.3	100.0	-----	92.7	[1] 82.3	100.0	-----	80.3	[1] 63.1

[1] Average for 8 months.

[2] Not including electric-railroad car building and repairing; see transportation equipment and railroad repair-shop groups, manufacturing industries, Table 1.

Trend of Employment in August, 1932, by States

IN THE following table are shown the fluctuations in employment and earnings in August, as compared with July, 1932, in certain industrial groups by States. These tabulations have been prepared from data secured directly from reporting establishments and from information supplied by cooperating State agencies. The combined total of all groups does not include building construction data, information concerning which is published elsewhere in a separate tabulation by city and State totals. In addition to the combined total of all groups, the trend of employment and earnings in the manufacturing, public-utility, hotel, wholesale-trade, retail-trade, bituminous-coal mining, crude petroleum producing, quarrying and nonmetallic mining, metalliferous mining, laundries, and dyeing and cleaning groups is presented. In publishing data concerning public utilities, the totals of the telephone and telegraph, power and light, and electric-railroad operation groups have been combined and are presented as one group in this State compilation. Due to the extreme seasonal fluctuations in the canning and preserving industry, and the fact that during certain months the activity in this industry in a number of States is negligible, data for this industry are not presented separately. The number of employees and the amount of weekly earnings in July and August as reported by identical establishments in this industry are included, however, in the combined total of "All groups."

The per cents of change shown in the accompanying tables, unless otherwise noted, are unweighted per cents of change; that is, the industries included in the groups and the groups comprising the total of all groups have not been weighted according to their relative importance in the combined totals.

As the anthracite-mining industry is confined entirely to the State of Pennsylvania, the changes reported in this industry in the summary table are the fluctuations in this industry by State total.

Where the identity of any reporting company would be disclosed by the publication of a State total for any industrial group, figures for the group do not appear in the separate industrial-group tabulation but have been included in the State totals for "All groups." Data are not presented for any industrial group where the representation in the State covers less than three establishments.

COMPARISON OF EMPLOYMENT AND EARNINGS IN **IDENTICAL** ESTABLISHMENTS IN JULY AND AUGUST, 1932, BY STATES

[Figures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued by cooperating State organizations]

State	Total—all groups					Manufacturing				
	Number of establishments	Number on pay roll, August, 1932	Per cent of change	Amount of pay roll (1 week), August, 1932	Per cent of change	Number of establishments	Number on pay roll, August, 1932	Per cent of change	Amount of pay roll (1 week), August, 1932	Per cent of change
Alabama	497	45,921	+1.1	$472,154	+3.9	202	31,666	+2.3	$318,745	+6.1
Arkansas	*452*	*13,620*	*+.5*	*199,359*	*+.3*	*183*	*8,829*	*+2.8*	*110,661*	*+4.5*
Arizona	362	7,805	−3.5	157,153	−7.9	62	2,003	−4.8	41,376	−7.0
California	*1,379*	*225,897*	*+9.6*	*5,268,550*	*+8.1*	*1,102*	*144,022*	*+15.7*	*3,173,433*	*+14.0*
Colorado	745	27,004	−5.6	545,266	−5.9	119	9,833	−1.8	191,033	−7.3
Connecticut	1,080	116,729	−2.7	2,072,350	−2.4	665	97,531	−2.6	1,576,626	−1.3
Delaware	129	8,067	−7.0	158,166	−.9	51	5,508	−2.4	106,980	+4.0
District of Columbia	585	28,061	−2.2	682,300	−2.9	55	3,812	−1.2	129,218	−3.1
Florida	511	20,877	−.9	340,351	−5.6	132	13,397	−.4	178,387	−6.3
Georgia	638	63,210	+4.1	770,797	+3.1	305	49,868	+4.2	502,747	+5.6
Idaho	201	7,870	+3.9	148,489	+4.0	41	4,450	+6.9	81,011	+9.0
Illinois	[1] *1,500*	*262,912*	*+1.3*	*5,389,028*	*+2.9*	*1,002*	*163,466*	*+2.3*	*2,864,275*	*+7.1*
Indiana	1,219	104,202	+.2	1,802,546	−.4	585	75,003	−1.9	1,252,434	−.9
Iowa	1,111	41,715	−.8	779,788	−1.9	465	22,546	+.1	402,891	−2.2
Kansas	[2]271,213	40,521	−.7	824,398	−2.1	383	21,951	−1.1	463,610	−1.4
Kentucky	818	56,116	+.3	830,277	+2.2	218	19,854	−.9	308,586	+.4
Louisiana	502	28,647	−1.3	431,642	+.1	222	17,496	−3.4	238,044	+.3
Maine	569	36,581	+10.8	609,307	+11.2	188	28,209	+11.3	441,770	+13.9
Maryland	[1] *841*	*69,999*	*−.1*	*1,304,535*	*−1.6*	*448*	*44,842*	[3] *+.9*	*749,016*	(3, 4)
Massachusetts	*7,900*	*321,201*	*+3.5*	*6,800,119*	*+1.9*	*1,078*	*144,504*	*+12.3*	*2,502,522*	*+13.7*
Michigan	1,551	261,877	−7.4	5,123,431	−16.9	*403*	*198,294*	*−8.7*	*3,791,959*	*−20.6*
Minnesota	975	60,191	−1.4	1,254.737	−2.8	288	20,098	−4.6	580,087	−4.0
Mississippi	398	9,104	+.4	111,094	+1.2	78	5,153	+2.1	50,254	+5.8
Missouri	1,123	98,498	−.1	2,001,076	−1.5	524	55,585	+.8	1,027,227	+.6
Montana	297	6,341	+11.9	143,814	+3.9	51	1,937	+4.4	42,211	+.6
Nebraska	670	20,770	−1.5	453,705	−2.0	131	10,268	−1.4	217,848	−2.5
Nevada	136	1,454	−6.3	40,533	−2.8	23	287	(4)	8,477	+2.1
New Hampshire	457	32,441	+8.2	523,796	+10.0	186	27,864	+8.7	425,540	+10.9
New Jersey	1,469	169,635	−1.5	3,646,607	−2.8	[5] *707*	*155,074*	*−2.4*	*3,222,666*	*−4.1*
New Mexico	177	4,475	+.5	75,034	+2.9	25	466	+.4	6,314	−13.6
New York	3,455	448,606	+.6	10,510,540	−.1	[6] *1,623*	*285,868*	*+3.4*	*6,248,801*	*+4.0*
North Carolina	854	97,674	+5.6	1,053,035	+13.1	532	92,972	+5.9	977,568	+14.2
North Dakota	262	3,672	−.1	82,086	−2.0	59	1,268	+5.1	30,026	+.5
Ohio	4,718	335,816	−2.6	6,017,891	−5.6	1,967	242,976	−3.4	4,114,196	−7.4
Oklahoma	700	24,541	+.4	515,806	−1.3	128	8,765	+.1	177,192	−2.2
Oregon	580	25,748	−4.7	498,725	−2.4	159	13,607	−.8	234,468	+1.1
Pennsylvania	4,104	548,488	+2.0	9,383,940	+4.0	*1,728*	*304,965*	*+1.7*	*4,374,150*	*+4.0*
Rhode Island	916	47,040	+9.4	838,105	+5.3	271	35,664	+13.5	573,433	+9.6
South Carolina	322	39,096	+7.8	364,128	+8.7	175	35,770	+9.3	310,225	+11.4
South Dakota	156	5,379	+1.6	123,961	+.4	47	2,006	+3.5	35,625	−2.4
Tennessee	727	55,894	+7.2	731,623	+8.9	273	40,040	+10.7	490,729	+15.0
Texas	*753*	*51,461*	*−.1*	*1,180,014*	*−1.1*	*343*	*25,434*	*+.1*	*498,746*	*−3.1*
Utah	331	12,008	−7.7	215,551	−5.0	86	3,353	+.2	67,857	+.1
Vermont	361	8,590	−.2	163,075	−1.5	117	4,198	−.9	78,200	−.1
Virginia	1,237	71,223	+.2	1,100,542	+.2	431	46,964	−1.5	695,212	−.3
Washington	1,178	46,279	−1.2	942,530	−.5	260	21,629	−1.3	396,135	+.3
West Virginia	723	72,407	−1.2	1,085,928	+1.0	189	27,423	−3.4	432,062	−5.0
Wisconsin	[7] *1,072*	*120,596*	*−1.8*	*1,953,089*	*+3.3*	[3] *807*	*92,577*	*−1.5*	*1,354,009*	*+5.5*
Wyoming	183	5,654	+2.7	134,058	+11.9	28	1,345	+1.7	40,736	+4.9

[1] Includes building and contracting.
[2] State bureau figures not received.
[3] Weighted per cent of change.
[4] No change.
[5] Includes laundries.
[6] Includes laundering and cleaning.
[7] Does not include hotels.

COMPARISON OF EMPLOYMENT AND EARNINGS IN **IDENTICAL** ESTABLISHMENTS IN JULY AND AUGUST, 1932, BY STATES—Continued

State	Wholesale trade					Retail trade				
	Number of establishments	Number on pay roll August, 1932	Per cent of change	Amount of pay roll (1 week) August, 1932	Per cent of change	Number of establishments	Number on pay roll August, 1932	Per cent of change	Amount of pay roll (1 week) August, 1932	Per cent of change
Alabama	15	547	−1.1	$14,073	−2.6	64	1,594	−1.6	$24,321	−4.6
Arkansas	17	464	−2.3	13,143	−2.2	159	1,539	−.9	27,579	−.9
Arizona	21	165	−6.2	4,447	−5.1	172	1,352	−.4	23,469	−1.0
California	68	4,523	−.1	134,738	−2.1	94	22,997	+1.4	462,485	+.7
Colorado	28	715	−2.3	20,864	−7.8	278	3,949	−2.9	84,730	−6.4
Connecticut	58	1,221	−1.2	34,187	−2.3	128	4,887	−10.0	103,602	−7.0
Delaware	9	166	(1)	4,845	+2.5	12	159	−7.0	2,368	−15.5
District of Columbia	29	396	+.3	12,885	−.6	405	9,590	−2.4	204,762	−4.7
Florida	50	742	−.3	18,636	−1.4	81	901	−2.7	17,308	−7.0
Georgia	30	372	−3.4	10,353	−3.3	33	1,905	−4.1	31,205	+.3
Idaho	7	114	+2.7	3,348	−1.0	66	644	−2.1	11,832	−.6
Illinois	15	869	+2.4	21,129	+.7	59	16,004	−.8	381,575	+1.1
Indiana	64	1,262	(1)	32,134	−2.8	188	5,587	−2.2	100,314	−3.9
Iowa	34	1,012	−1.7	26,437	−3.5	125	3,045	+1.4	53,589	−2.6
Kansas	55	1,717	+5.1	32,701	−1.8	214	3,991	−1.2	69,858	−5.8
Kentucky	21	476	−.6	9,675	−.3	30	1,403	−9.2	21,715	−6.8
Louisiana	23	578	−3.8	12,673	−1.2	53	2,803	+.6	40,869	−1.6
Maine	17	490	−.2	11,404	+2.1	69	1,079	−1.4	20,000	−.1
Maryland	35	791	−1.7	17,648	−2.5	35	4,665	−2.9	78,341	−7.3
Massachusetts	674	14,104	−1.2	382,066	−2.4	4,082	54,362	−3.3	1,132,241	−3.9
Michigan	70	1,884	+.4	54,287	−2.1	245	10,043	−6.2	212,398	−5.6
Minnesota	64	3,934	−.7	109,424	−2.0	284	6,487	−.2	119,971	−3.1
Mississippi	5	115	−1.7	2,339	−1.6	60	427	−4.9	4,975	−11.7
Missouri	57	4,956	−.5	123,436	−1.4	134	5,343	−.1	110,755	−2.1
Montana	12	215	−.5	6,303	−1.6	56	760	−.5	16,613	−1.3
Nebraska	31	914	−1.1	25,162	−2.3	162	1,559	−4.1	29,869	−6.9
Nevada	8	94	−6.0	3,575	−4.4	31	257	−2.7	7,086	−5.5
New Hampshire	15	162	(1)	4,344	−.2	60	584	+2.1	10,281	−1.9
New Jersey	28	593	+.5	18,502	−.1	429	6,984	−1.2	152,312	−2.6
New Mexico	5	72	+1.4	2,411	−4.9	48	277	−3.1	5,804	−3.2
New York	182	5,464	+.5	174,638	−1.5	515	41,216	−2.4	917,696	−4.0
North Carolina	18	257	−.8	6,258	+.8	175	555	+1.1	10,921	+.5
North Dakota	16	221	−.5	6,444	−4.7	40	358	−11.4	5,719	−16.4
Ohio	230	4,849	−1.3	126,954	−3.6	1,530	28,306	−2.8	541,349	−4.9
Oklahoma	49	739	+2.4	19,611	+.3	108	1,512	−2.1	27,702	−6.1
Oregon	54	1,280	−3.0	35,775	−2.5	92	1,694	−1.0	34,672	−6.2
Pennsylvania	134	3,502	−1.1	95,069	−1.7	340	22,825	−7.5	451,834	−7.7
Rhode Island	41	982	−3.0	24,611	−2.6	514	4,769	−1.6	102,263	−3.7
South Carolina	18	268	+6.8	6,004	−.6	15	372	−3.9	3,733	−1.5
South Dakota	10	129	+.8	3,798	−2.1	14	223	−10.4	3,251	−4.4
Tennessee	34	592	−.7	12,221	−4.3	55	2,971	−5.2	49,687	−1.4
Texas	157	2,706	−3.5	74,720	−2.7	85	6,338	−3.7	116,519	−1.1
Utah	16	494	−1.6	12,191	−1.7	81	528	−4.2	13,314	+3.1
Vermont	5	122	+.8	3,015	−1.4	45	471	−4.5	8,571	−2.0
Virginia	43	1,218	+49.3	24,702	+15.4	474	4,370	−3.1	79,406	−9.1
Washington	95	2,196	−1.1	61,575	−1.7	465	5,884	−2.7	114,047	−3.6
West Virginia	35	550	−5.8	15,568	−7.0	48	884	−9.7	15,971	−6.1
Wisconsin	41	1,725	+1.2	38,049	+7.7	51	6,824	−3.8	109,390	−4.7
Wyoming	8	57	(1)	1,739	−2.1	42	224	−2.6	5,819	−1.4

[1] No change.

COMPARISON OF EMPLOYMENT AND EARNINGS IN **IDENTICAL** ESTABLISHMENTS IN JULY AND AUGUST, 1932, BY STATES—Continued

State	Quarrying and nonmetallic mining					Metalliferous mining				
	Number of establishments	Number on pay roll August, 1932	Per cent of change	Amount of pay roll (1 week) August, 1932	Per cent of change	Number of establishments	Number on pay roll August, 1932	Per cent of change	Amount of pay roll (1 week) August, 1932	Per cent of change
Alabama	8	676	+27.1	$5,528	+24.1	8	680	−0.1	$4,199	+29.6
Arkansas	9	124	+10.7	1,332	+6.0					
Arizona						17	2,401	−4.9	44,503	−16.7
California	29	622	+.2	12,215	−9.9	19	1,368	+.8	36,205	+3.3
Colorado						14	580	−18.1	15,136	−20.4
Connecticut	10	215	+58.1	3,073	+24.0					
Delaware										
District of Columbia										
Florida	6	567	−2.4	6,180	−2.6					
Georgia	19	1,096	+7.5	10,993	+9.4					
Idaho						11	1,586	−.5	33,959	+1.2
Illinois	26	703	+1.3	11,798	+1.3					
Indiana	38	1,968	−.3	34,314	−2.0					
Iowa	17	395	+8.5	6,339	+12.7					
Kansas	22	949	−1.9	20,764	+2.6	12	26	(1)	398	−1.7
Kentucky	27	913	+20.9	6,991	+23.3					
Louisiana	4	495	+9.5	4,418	+8.9					
Maine	7	365	+111.0	7,808	+69.7					
Maryland	*16*	*327*	*+7.9*	*5,696*	*+.9*					
Massachusetts										
Michigan	22	632	+2.4	8,747	+7.0	43	3,894	−8.3	41,786	+7.6
Minnesota	7	206	+2.0	4,264	+11.7	22	672	+8.4	8,863	+1.6
Mississippi	3	38	+111.1	169	+302.4					
Missouri	12	280	+59.1	3,319	+16.0	12	1,022	+3.5	18,915	+3.6
Montana	4	22	+15.8	308	+23.2	16	115	+9.5	2,352	+18.0
Nebraska	3	91	−31.1.	1,358	−31.4					
Nevada						15	155	−14.8	4,804	−3.
New Hampshire	9	144	+22.0	4,582	+50.0					
New Jersey	3	23	−46.5	574	−62.3					
New Mexico						5	846	+.6	16,195	+12.7
New York	43	2,087	+3.3	44,092	+4.5					
North Carolina	4	55	−1.8	856	+5.4					
North Dakota										
Ohio	66	2,018	+6.2	33,563	+6.8					
Oklahoma	4	59	−3.3	732	−4.9	30	564	+3.9	8,411	+22.8
Oregon						6	96	−15.8	2,134	−15.7
Pennsylvania	55	2,572	+2.7	30,842	+10.2					
Rhode Island										
South Carolina	8	139	−6.1	651	−13.1					
South Dakota	5	40	+53.8	828	+75.1					
Tennessee	22	1,080	+3.3	13,576	+8.9	4	194	+10.9	2,372	−3.4
Texas	*13*	*574*	*−3.9*	*12,942*	*+5.6*					
Utah						11	2,018	−4.5	31,555	−1.9
Vermont	38	2,070	−1.8	41,014	−6.4					
Virginia	16	893	+.9	9,735	+22.6					
Washington	8	179	+1.7	4,195	−2.6					
West Virginia	8	409	+2.8	3,548	−11.4					
Wisconsin	*13*	*119*	*−37.0*	*1,605*	*−44.5*					
Wyoming										

[1] No change.

COMPARISON OF EMPLOYMENT AND EARNINGS IN **IDENTICAL** ESTABLISHMENTS IN JULY AND AUGUST, 1932, BY STATES—Continued

State	Bituminous coal mining					Crude petroleum producing				
	Number of establishments	Number on pay roll August, 1932	Per cent of change	Amount of pay roll (1 week) August, 1932	Per cent of change	Number of establishments	Number on pay roll August, 1932	Per cent of change	Amount of pay roll (1 week) August, 1932	Per cent of change
Alabama	39	6,858	−2.0	$45,737	+2.0					
Arkansas	*5*	*89*	*+32.8*	*1,641*	*+141.5*	10	227	(1)	$5,333	−4.7
Arizona										
California						37	4,179	−3.0	129,374	−7.2
Colorado	38	3,048	−7.6	41,446	+6.4					
Connecticut										
Delaware										
District of Columbia										
Florida										
Georgia										
Idaho										
Illinois	*21*	*1,557*	*+83.8*	*21,621*	*+13.7*	7	136	−1.4	3,067	+.3
Indiana	36	1,872	−16.5	47,501	+6.8	4	32	+6.7	511	−1.0
Iowa	22	1,953	−5.3	33,796	+9.1					
Kansas	13	473	+18.8	6,968	+30.3	35	1,241	+.2	29,510	−3.8
Kentucky	141	22,989	+1.4	274,470	+8.6	6	183	−1.1	3,591	−1.6
Louisiana						10	188	+11.2	4,971	+10.1
Maine										
Maryland	*13*	*1,244*	*+.1*	*6,242*	*−2.3*					
Massachusetts										
Michigan	3	246	−56.3	2,652	−18.3					
Minnesota										
Mississippi										
Missouri	16	991	+7.4	16,173	−1.9					
Montana	6	360	+462.5	4,259	+65.3	5	50	+22.0	1,236	+22.0
Nebraska										
Nevada										
New Hampshire										
New Jersey										
New Mexico	12	1,689	+.5	24,562	+7.8	4	29	+52.6	865	−18.8
New York						5	172	−7.0	4,114	−4.8
North Carolina										
North Dakota										
Ohio	56	5,460	+19.8	77,156	+37.9	5	58	−13.4	975	−10.6
Oklahoma	16	400	+42.9	4,843	+6.1	65	4,528	+.2	117,375	−.6
Oregon										
Pennsylvania	367	51,790	−.5	532,259	+2.1	19	352	−2.8	9,040	−.2
Rhode Island										
South Carolina										
South Dakota										
Tennessee	14	2,437	−2.7	17,366	−5.3					
Texas						*3*	*6,627*	*+4.7*	*249,181*	*+2.5*
Utah	14	1,303	−2.5	22,996	−.9					
Vermont										
Virginia	32	8,193	+7.6	104,234	+11.0					
Washington	11	482	−15.9	10,127	−12.7					
West Virginia	240	34,718	+.8	424,836	+11.0	9	386	−.5	9,123	−5.4
Wisconsin										
Wyoming	32	3,092	+4.0	65,816	+23.2	5	68	+13.3	2,014	+4.5

(1) No change.

COMPARISON OF EMPLOYMENT AND EARNINGS IN **IDENTICAL** ESTABLISHMENTS IN JULY AND AUGUST, 1932, BY STATES—Continued

State	Public utilities					Hotels				
	Number of establishments	Number on pay roll August, 1932	Per cent of change	Amount of pay roll (1 week) August, 1932	Per cent of change	Number of establishments	Number on pay roll August, 1932	Per cent of change	Amount of pay roll (1 week) August, 1932	Per cent of change
Alabama	123	1,966	−.6	42,167	−1.4	27	1,179	−9.9	10,255	−8.1
Arkansas	*50*	*1,185*	*−15.1*	*29,143*	*−13.4*	*17*	*822*	*+.8*	*8,914*	*−1.8*
Arizona	67	1,331	−2.6	35,480	−1.2	13	308	−1.3	4,509	−7.7
California	*42*	*48,579*	*−.2*	*1,387,536*	*+.3*	264	11,354	+.5	187,379	+2.1
Colorado	196	5,613	−1.4	144,689	−4.5	33	1,301	+.8	20,606	+1.7
Connecticut	145	10,080	−1.0	309,813	−6.0	34	1,139	−.2	14,839	−2.9
Delaware	28	1,113	+1.5	29,804	+.8	6	249	−4.6	2,923	−3.2
District of Columbia	22	8,285	−1.6	244,790	−.4	51	3,536	−3.9	51,335	−6.5
Florida	184	4,093	−.8	107,381	−4.7	35	650	−5.0	6,828	−10.6
Georgia	186	6,804	−2.2	192,902	−2.1	35	1,496	−6.0	12,330	−10.2
Idaho	57	728	−.5	14,029	−5.7	15	246	−7.9	3,399	−9.6
Illinois	*63*	*67,448*	*−1.4*	*1,844,397*	*−2.6*	[9] *49*	*8,126*	*−3.6*	*125,539*	*−9.6*
Indiana	133	6,407	−2.3	170,342	+.4	60	2,552	−1.0	28,082	−4.8
Iowa	373	9,958	−1.3	227,552	−1.7	50	1,885	−2.3	19,406	−5.1
Kansas	402	8,196	−1.3	180,511	−3.2	36	808	−2.4	7,888	−5.0
Kentucky	304	7,102	−1.1	168,365	−2.3	39	1,701	−1.7	18,051	−4.9
Louisiana	152	4,456	−.5	106,411	−.1	24	1,841	−4.4	19,822	−7.7
Maine	170	2,875	−4.3	80,757	−2.8	31	1,814	+18.4	24,043	+21.1
Maryland	*92*	*12,720*	*−1.2*	*364,278*	*−1.3*	*24*	*1,159*	*−2.5*	*14,896*	*−1.8*
Massachusetts	[9] *138*	*45,768*	*−2.0*	*1,309,282*	*−3.3*	*105*	*5,805*	*−3.3*	*87,088*	*−6.9*
Michigan	407	23,047	−2.7	653,597	−4.4	78	4,501	+2.2	56,871	−3.6
Minnesota	200	13,106	−1.4	352,183	−1.1	63	2,962	−.8	36,568	−4.2
Mississippi	213	2,224	+1.0	42,772	−.6	22	628	−2.9	5,295	−2.4
Missouri	222	22,242	−3.3	600,247	−3.7	82	4,350	−2.9	50,042	−13.4
Montana	111	1,904	−.3	55,646	−.2	17	270	+3.8	4,084	−2.7
Nebraska	296	5,738	−2.4	152,291	+.4	32	1,475	+2.3	15,585	−6.3
Nevada	40	382	−14.5	10,949	−6.5	14	213	+3.9	4,083	+3.3
New Hampshire	143	2,131	−1.3	59,679	+.6	26	1,218	+21.1	13,985	+40.3
New Jersey	278	22,488	−1.8	664,108	−2.3	95	6,147	+9.5	81,217	+7.7
New Mexico	54	521	−.2	11,485	+.1	16	319	−1.2	3,355	−4.1
New York	903	109,706	−1.2	3,388,265	−2.7	282	30,457	−1.5	473,620	−4.6
North Carolina	76	1,749	−1.6	37,544	+1.1	35	1,316	+1.5	11,724	−.9
North Dakota	117	1,217	−1.1	31,383	+.2	17	334	−.6	3,721	−7.2
Ohio	493	34,537	−2.2	884,402	−.6	173	9,388	−2.7	119,112	−5.0
Oklahoma	240	5,684	−2.6	131,231	−1.0	41	793	−2.5	7,516	−5.8
Oregon	187	5,816	−.3	150,704	−1.1	42	1,110	+2.2	15,800	−1.2
Pennsylvania	706	61,172	−1.1	1,701,602	−2.8	194	9,949	−4.2	124,619	−6.8
Rhode Island	35	3,481	−2.5	103,863	−2.6	26	699	+2.6	8,241	−4.7
South Carolina	71	1,686	−3.7	36,538	−4.2	17	330	−6.2	2,481	−11.4
South Dakota	57	887	+1.6	23,845	+1.3	14	312	+2.3	3,681	−2.7
Tennessee	254	5,021	−.8	113,725	−1.3	42	2,256	−3.3	20,273	−6.3
Texas	*131*	*6,813*	*+.4*	*190,943*	*−.1*	*44*	*2,969*	*−.6*	*36,963*	*−.2*
Utah	65	1,838	−.1	38,738	−1.3	14	517	−5.5	7,307	−12.2
Vermont	121	999	+.7	23,860	+.1	26	588	+10.7	6,518	+8.1
Virginia	153	5,818	−[10]	145,841	−1.3	39	2,014	−3.8	23,003	−4.6
Washington	202	10,193	+1.2	279,593	+.3	58	2,074	−.6	25,689	−3.1
West Virginia	126	6,102	−1.3	160,584	−2.9	41	1,114	−.9	12,640	−3.5
Wisconsin	[11] *42*	*11,166*	*−1.1*	*309,078*	*−1.9*	[9] *42*	*1,257*	*−1.7*	[12]	-------
Wyoming	48	437	−2.2	11,077	−.7	12	200	+4.2	3,026	−2.7

[9] Includes restaurants.
[9] Includes steam railroads.
[10] Less than one-tenth of 1 per cent.
[11] Includes steam railways and express.
[12] Data not supplied.

COMPARISON OF EMPLOYMENT AND EARNINGS IN **IDENTICAL** ESTABLISHMENTS IN JULY AND AUGUST, 1932, BY STATES—Continued

State	Laundries					Dyeing and cleaning				
	Number of establishments	Number on pay roll August, 1932	Per cent of change	Amount of pay roll (1 week) August, 1932	Per cent of change	Number of establishments	Number on pay roll August, 1932	Per cent of change	Amount of pay roll (1 week) August, 1932	Per cent of change
Alabama	4	417	−5.0	$3,841	−4.6	4	196	+4.8	$1,912	−8.7
Arkansas	*19*	*505*	*−.2*	*5,154*	*−3.2*	3	32	−11.1	400	−9.1
Arizona	8	227	−4.2	3,128	−7.3					
California	[13] *73*	*5,776*	*+.6*	*110,358*	*−.2*					
Colorado	11	858	−.8	12,776	−3.8	9	148	+.7	2,874	−5.2
Connecticut	28	1,360	−3.1	23,580	−3.5	11	284	−4.7	6,352	−8.4
Delaware	4	315	−.3	4,819	−3.0	3	40	−4.8	648	−4.6
District of Columbia	16	2,306	−2.4	36,527	−4.1	6	130	−5.1	2,683	−8.5
Florida	9	458	−.7	4,661	−3.1					
Georgia	13	690	+.3	6,601	−5.4	5	131	−9.0	1,515	−6.6
Idaho										
Illinois	[13] *21*	*1,355*	*−4.4*	*20,065*	*−8.3*					
Indiana	20	1,592	−2.6	20,788	−9.0	9	160	−9.6	2,580	−11.1
Iowa	3	219	−.5	3,463	−4.4					
Kansas	36	1,102	−3.4	12,021	−6.0	3	13	−7.1	186	−12.3
Kentucky	18	825	−2.1	10,739	−5.4	5	224	−2.6	3,324	−2.2
Louisiana										
Maine	22	564	+2.0	8,901	+3.4					
Maryland	*25*	*1,931*	*−1.4*	*29,807*	*−3.9*	*9*	*320*	*−11.9*	*4,152*	*−14.6*
Massachusetts	*105*	*5,604*	*−1.4*	*61,308*	*−2.8*	*122*	*1,934*	*−1.8*	*35,488*	*−3.8*
Michigan	22	1,524	−4.8	19,148	−8.4	17	565	−11.7	9,563	−24.6
Minnesota	14	823	−1.1	13,671	−4.6	11	311	−.3	5,752	+1.6
Mississippi	7	382	(4)	3,496	−2.6					
Missouri	35	2,516	−4.0	36,269	−5.7	15	425	−5.8	7,143	−11.2
Montana	15	342	−2.0	6,320	−2.2					
Nebraska	7	469	+2.9	7,006	−3.7	5	129	−.8	3,109	−1.1
Nevada	4	59	+1.7	1,365	+7.5					
New Hampshire	16	314	+1.0	4,983	−2.2					
New Jersey	26	3,132	+3.0	64,974	+1.6	8	329	−5.5	9,751	+1.7
New Mexico	5	242	+5.7	3,764	+5.7					
New York	70	6,761	−4.3	119,211	−5.0	19	569	−6.1	11,976	−6.5
North Carolina	12	737	−.8	7,908	−1.9					
North Dakota	11	252	−1.9	4,372	−2.5					
Ohio	81	4,518	−3.7	70,044	−5.9	48	1,664	−4.8	27,001	−11.0
Oklahoma	7	57-	−1.0	7,105	−6.4	3	162	−1.2	2,273	−2.1
Oregon	4	320	−.3	5,019	−2.5	5	50	(4)	1,095	+.3
Pennsylvania	43	3,284	−3.3	50,355	−6.8	26	1,250	−2.5	20,682	−6.7
Rhode Island	21	1,135	−1.6	19,741	−.6	6	292	+2.1	5,600	+2.6
South Carolina	8	330	+4.8	3,265	+10.4					
South Dakota	7	148	−1.3	2,160	−4.0					
Tennessee	13	942	−.6	8,374	−3.9	4	38	−2.6	573	+1.1
Texas	25	1,313	−3.0	15,955	−5.3	17	395	−2.5	6,431	−2.7
Utah	7	519	−3.2	7,195	−4.3	7	117	−3.3	2,094	−3.3
Vermont	5	80	−3.6	1,049	+4.0	3	26	(4)	490	+4.0
Virginia	14	958	−1.2	11,336	−1.8	23	323	−3.6	4,933	−7.2
Washington	14	737	+13.4	12,367	−9.4	15	226	+3.7	3,910	−7.1
West Virginia	19	660	−1.9	9,135	−3.8	8	161	−.6	2,461	−3.7
Wisconsin	[13] *26*	*943*	*−2.7*	*13,202*	*−10.2*					
Wyoming	4	111	+7.8	1,998	+5.7					

[4] No change.
[13] Includes dyeing and cleaning.

Employment and Earnings in August, 1932, in Cities of Over 500,000 Population

IN THE following table are presented the fluctuations in employment and earnings in August, 1932, as compared with July, 1932, for 13 cities of the United States having a population of 500,000 or

over. These changes are computed from reports received from identical establishments in each of the months considered.

In addition to including reports received from establishments in the several industrial groups regularly covered in the bureau's survey, excluding building construction, reports have also been secured from financial institutions, insurance offices, and other establishments in these cities for inclusion in these totals. Information concerning employment in building construction is not available for all cities at this time and therefore has not been included.

FLUCTUATIONS IN EMPLOYMENT AND EARNINGS IN AUGUST, 1932, AS COMPARED WITH JULY, 1932

Cities	Number of establishments reporting in both months	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		July, 1932	August, 1932		July, 1932	August, 1932	
New York City	2,013	275,799	280,474	+1.7	$7,739,380	$7,770,154	+0.4
Chicago, Ill	1,837	177,654	179,857	+1.2	4,080,599	4,088,882	+.2
Philadelphia, Pa	666	114,542	114,306	−.2	2,440,244	2,432,942	−.3
Detroit, Mich	583	202,735	183,074	−9.7	4,965,891	3,906,958	−21.3
Los Angeles, Calif	546	50,005	50,488	+1.0	1,193,014	1,196,726	+.3
Cleveland, Ohio	1,046	77,360	75,428	−2.5	1,547,787	1,509,858	−2.5
St. Louis, Mo	498	63,387	62,992	−.6	1,338,686	1,323,153	−1.2
Baltimore, Md	553	43,902	43,261	−1.5	866,133	846,219	−2.3
Boston, Mass	2,960	80,653	81,595	+1.2	2,010,297	1,992,148	−.9
Pittsburgh, Pa	334	46,646	44,669	−4.2	928,556	867,845	−6.5
San Francisco, Calif	897	38,052	39,201	+3.0	931,485	943,860	+1.3
Buffalo, N. Y	273	34,824	32,971	−5.3	773,899	728,106	−5.9
Milwaukee, Wis	472	33,599	33,068	−1.6	628,933	628,642	(1)

[1] Less than one-tenth of 1 per cent.

Employment in Executive Civil Service of the United States, August, 1932

THE number of workers on the Federal pay roll at the end of August, 1932, was 11,597 less than at the end of August, 1931.

Comparing August with July, 1932, there was a gain of 2,308 employees. This was entirely due, however, to an increase in the number of temporary employees in the War Department outside of Washington, D. C.

These figures do not include the legislative, judicial, or Army and Navy services. The data as shown in the table below are compiled by the various Federal departments and offices and sent to the United States Civil Service Commission, where they are assembled. They are tabulated by the Bureau of Labor Statistics and published here by courtesy of the Civil Service Commission, and in compliance with the direction of Congress. No information has as yet been collected relative to the amounts of pay rolls. Because of the importance of Washington as a government center, the figures for the District of Columbia and for the Government service outside the District of Columbia are shown separately.

At the end of August, 1932, there were 575,366 employees in the executive civil service of the United States. Of this number, 535,980 were permanent employees and 39,386 were temporary employees. In the interval between August 31, 1931, and August 31, 1932, there was a loss of 0.8 of 1 per cent in the number of permanent

employees and a loss of 15.9 per cent in the number of temporary employees. The loss of total employees was 2.0 per cent.

The number of employees in the District of Columbia showed a decrease of 5.0 per cent in August, 1932, as compared with August, 1931. Permanent employees in the District of Columbia showed a slight increase comparing these two periods. This increase was caused by the taking on of new employees by the Reconstruction Finance Corporation. Exclusive of this agency there was a decrease in the number of permanent Government employees in the District of Columbia. The number of temporary employees decreased 59.1 per cent comparing these two periods. There was a decrease of 0.4 of 1 per cent in Federal employees in the District of Columbia comparing August with July, 1932.

During the month of August, 1932, 21,421 were hired in the entire Federal service and 19,113 were separated from the service on account of resignation, termination of appointment, death, retirement, or other causes. This indicates a net turnover rate of 3.33 for the month. The turnover rate for the District of Columbia was 0.51.

On August 31, 1932, there were 67,259 employees on the Government pay rolls in the District of Columbia. Of this number, 64,795 were permanent and 2,464 were temporary workers.

EMPLOYEES IN THE EXECUTIVE CIVIL SERVICE OF THE UNITED STATES, AUGUST, 1931, AND JULY AND AUGUST, 1932 [1]

Item	District of Columbia			Outside the District			Entire service		
	Permanent	Temporary [2]	Total	Permanent	Temporary [2]	Total	Permanent	Temporary [2]	Total
Number of employees:									
August, 1931	64,791	6,026	70,817	475,341	40,805	516,146	540,132	46,831	586,963
July, 1932	65,098	2,454	67,552	472,900	32,606	505,506	537,998	35,060	573,058
August, 1932	64,795	2,464	67,259	471,185	36,922	508,107	535,980	39,386	575,366
Gain or loss:									
August, 1931–August, 1932	+4	−3,562	−3,558	−4,156	−3,883	−8,039	−4,152	−7,445	−11,597
July, 1932–August, 1932	−303	+10	−293	−1,715	+4,316	+2,601	−2,018	+4,326	+2,308
Per cent of change:									
August, 1931–August, 1932	+(3)	−59.1	−5.0	−0.9	−9.5	−1.6	−0.8	−15.9	−2.0
July, 1932–August, 1932	−0.5	+0.4	−0.4	−0.4	+13.2	+0.5	−0.4	+12.3	+0.4
Labor turnover, August, 1932:									
Additions	96	285	381	1,698	19,342	21,040	1,794	19,627	21,421
Separations	399	275	674	3,413	15,026	18,439	3,812	15,301	19,113
Turnover rate	0.15	11.18	0.51	0.36	43.22	3.64	0.33	41.11	3.33

[1] Certain revisions have been made from time to time by the Civil Service Commission in dropping certain classes of employees previously carried in the tabulations. Thus, in the District of Columbia 68 mail contractors and special-delivery messengers were eliminated from the enumeration in May, 1932, and in the service outside the District of Columbia 35,800 star-route and other contractors, clerks in charge of mail contract stations, clerks in third-class post offices, and special-delivery messengers were eliminated in April, 1932, and 835 collaborators of the Department of Agriculture in June, 1932. In the table, in order to make the figures comparable for all the months shown, it was assumed that the number of these employees was the same in August, 1931, as in the month they were dropped from the tabulation (actual figures not being available from the Civil Service Commission), and the data for this month have been revised accordingly in this table.

[2] Not including field service of the Post Office Department.

[3] Less than one-tenth of 1 per cent.

Employment in Building Construction in August, 1932

EMPLOYMENT in the building construction industry decreased 1.9 per cent in August as compared with July, and earnings decreased 3.6 per cent. These figures are based on pay-roll reports received from 10,464 firms engaged on building operations in 34 States and the District of Columbia.

COMPARISON OF EMPLOYMENT AND TOTAL PAY ROLL IN THE **BUILDING CONSTRUCTION** INDUSTRY IN IDENTICAL FIRMS, JULY AND AUGUST, 1932

Locality	Number of firms reporting in both months	Number on pay roll—		Per cent of change	Amount of pay roll (1 week)—		Per cent of change
		July	August		July	August	
Alabama, Birmingham	69	528	440	−16.7	$7,234	$6,219	−14.0
California:							
Los Angeles [1]	26	1,708	1,638	−4.1	38,572	34,234	−11.2
San Francisco-Oakland [1]	30	995	954	−4.1	20,980	22,061	+5.2
Other reporting localities [1]	25	603	596	−1.2	12,385	13,492	+8.9
Colorado, Denver	188	709	699	−1.4	16,424	13,876	−15.5
Connecticut:							
Bridgeport	127	632	529	−16.3	15,815	13,395	−15.3
Hartford	230	1,155	1,127	−2.4	32,061	30,368	−5.3
New Haven	199	1,484	1,416	−4.6	44,134	40,541	−8.1
Delaware, Wilmington	116	1,542	1,298	−15.8	35,009	29,007	−17.1
District of Columbia	547	6,190	6,083	−1.7	170,285	167,731	−1.5
Florida:							
Jacksonville	48	341	325	−4.7	5,083	5,355	+5.4
Miami	75	534	577	+8.1	9,826	10,575	+7.6
Georgia, Atlanta	127	1,239	1,442	+16.4	15,480	19,594	+26.6
Illinois:							
Chicago [1]	138	1,237	1,181	−4.5	36,447	40,492	+11.1
Other reporting localities [1]	85	890	918	+3.1	22,368	25,539	+14.2
Indiana:							
Fort Wayne	110	659	572	−13.2	13,842	12,102	−12.6
Indianapolis	162	1,070	1,066	−.4	27,826	25,643	−7.8
South Bend	46	288	195	−32.3	6,322	3,880	−38.6
Iowa, Des Moines	100	373	545	+46.1	7,470	9,818	+31.4
Kansas, Wichita	62	458	443	−3.3	9,002	8,283	−8.0
Kentucky, Louisville	129	903	777	−14.0	18,163	14,653	−19.3
Louisiana, New Orleans	129	1,642	1,943	+18.3	26,718	29,656	+11.0
Maine, Portland	103	495	462	−6.7	11,609	10,025	−13.6
Maryland, Baltimore [1]	119	1,391	1,531	+10.1	23,867	26,953	+12.9
Massachusetts, all reporting localities [1]	746	6,562	6,086	−7.3	183,319	166,963	−8.9
Michigan:							
Detroit	450	2,672	2,751	+3.0	57,626	58,456	+1.4
Flint	36	124	142	+14.5	2,288	2,437	+6.5
Grand Rapids	113	632	616	−2.5	13,054	12,659	−3.0
Minnesota:							
Duluth	51	148	233	+57.4	2,803	4,328	+54.4
Minneapolis	230	1,681	1,628	−3.2	41,606	36,741	−11.7
St. Paul	142	1,347	1,208	−10.3	34,231	29,697	−13.2
Missouri:							
Kansas City [2]	262	2,042	1,782	−12.7	58,494	46,265	−20.9
St. Louis	432	2,550	2,408	−5.6	70,021	63,650	−9.1
Nebraska, Omaha	133	902	889	−1.4	19,220	17,813	−7.3
New York:							
New York City [1]	332	9,864	9,938	+.8	402,100	396,673	−1.3
Other reporting localities [1]	175	3,878	3,956	+2.0	116,075	116,915	+.7
North Carolina, Charlotte	39	207	256	+23.7	2,934	3,111	+6.0
Ohio:							
Akron	87	359	320	−10.9	7,350	6,543	−11.0
Cincinnati [3]	490	3,191	2,941	−7.8	89,906	78,810	−12.3
Cleveland	475	2,374	2,254	−5.1	59,985	61,622	+2.7
Dayton	122	429	399	−7.0	9,154	8,635	−5.7
Youngstown	65	312	349	+11.9	6,047	7,615	+25.9
Oklahoma:							
Oklahoma City	94	478	405	−15.3	8,269	6,408	−22.5
Tulsa	58	257	243	−5.4	4,584	3,761	−18.0
Oregon, Portland	195	1,140	1,339	+17.5	24,737	29,598	+19.7
Pennsylvania:							
Erie [1]	32	222	239	+7.7	5,565	5,598	+.6
Philadelphia [1]	491	4,885	4,704	−3.7	110,020	109,668	−.3
Pittsburgh [1]	253	1,454	1,435	−1.3	41,553	37,636	−9.4
Reading-Lebanon [1]	55	416	386	−7.2	8,271	7,034	−15.0
Scranton [1]	32	163	150	−8.0	3,977	3,787	−4.8
Other reporting localities [1]	318	2,269	2,252	−.7	46,254	45,410	−1.8
Rhode Island, Providence	238	1,727	1,551	−10.2	44,030	37,788	−14.2
Tennessee:							
Knoxville	42	464	518	+11.6	6,216	7,438	+19.7
Memphis	95	515	467	−9.3	10,237	8,249	−19.4
Nashville	75	689	639	−7.3	12,488	11,337	−9.2
Texas:							
Dallas	148	897	833	−7.1	14,969	14,156	−5.4
Houston	116	675	616	−8.7	12,087	10,644	−11.9
San Antonio	98	681	745	+9.4	10,415	12,119	+16.4

[1] Data supplied by cooperating State bureaus.
[2] Includes both Kansas City, Mo., and Kansas City, Kans.
[3] Includes Covington and Newport, Ky.

COMPARISON OF EMPLOYMENT AND TOTAL PAY ROLL IN THE **BUILDING CONSTRUCTION** INDUSTRY IN IDENTICAL FIRMS, JULY AND AUGUST, 1932—Con.

Locality	Number of firms reporting in both months	Number on pay roll—		Per cent of change	Amount of pay roll (1 week)—		Per cent of change
		July	August		July	August	
Utah, Salt Lake City	88	360	321	−10.8	$7,021	$6,006	−14.5
Virginia:							
Norfolk-Portsmouth	94	623	544	−12.7	11,316	9,926	−12.3
Richmond	156	1,104	1,062	−3.8	22,934	21,835	−4.8
Washington:							
Seattle	176	745	875	+17.4	17,592	17,934	+1.9
Spokane	49	202	186	−7.9	3,872	4,443	+14.7
Tacoma	78	142	131	−7.7	2,454	2,106	−14.2
West Virginia, Wheeling	53	193	181	−6.2	3,761	3,710	−1.4
Wisconsin, all reporting localities [1]	60	1,432	1,635	+14.2	29,473	34,298	+16.4
Total, all localities	10,464	88,073	86,370	−1.9	2,265,230	2,183,314	−3.6

[1] Data supplied by cooperating State bureaus.

Employment on Class I Steam Railroads in the United States

DATA are not yet available concerning railroad employment for August, 1932. Reports of the Interstate Commerce Commission for Class I railroads show that the number of employees (exclusive of executives and officials) decreased from 1,033,887 on June 15, 1932, to 1,008,608 on July 15, 1932, or 2.4 per cent; the amount of pay roll decreased from $119,608,254 in June to $114,801,532 in July, or 4.0 per cent.

The monthly trend of employment from January, 1923, to July, 1932, on Class I railroads—that is, all roads having operating revenues of $1,000,000 or over—is shown by the index numbers published in the following table. These index numbers are constructed from monthly reports of the Interstate Commerce Commission, using the 12-month average for 1926 as 100.

TABLE 1.—INDEX OF EMPLOYMENT, ON **CLASS I STEAM RAILROADS** IN THE UNITED STATES, JANUARY, 1923, TO JULY, 1932

[12-month average, 1926=100]

Month	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
January	98.3	96.9	95.6	95.8	95.5	89.3	88.2	86.3	73.7	61.2
February	98.6	97.0	95.4	96.0	95.3	89.0	88.9	85.4	72.7	60.3
March	100.5	97.4	95.2	96.7	95.8	89.9	90.1	85.5	72.9	60.5
April	102.0	98.9	96.6	98.9	97.4	91.7	92.2	87.0	73.5	60.0
May	105.0	99.2	97.8	100.2	99.4	94.5	94.9	88.6	73.9	59.7
June	107.1	98.0	98.6	101.6	100.9	95.9	96.1	86.5	72.8	57.8
July	108.2	98.1	99.4	102.9	101.0	95.6	96.6	84.7	72.4	56.4
August	109.4	99.0	99.7	102.7	99.5	95.7	97.4	83.7	71.2	-------
September	107.8	99.7	99.9	102.8	99.1	95.3	96.8	82.2	69.3	-------
October	107.3	100.8	100.7	103.4	98.9	95.3	96.9	80.4	67.7	-------
November	105.2	99.0	99.1	101.2	95.7	92.9	93.0	77.0	64.5	-------
December	99.4	96.0	97.1	98.2	91.9	89.7	88.8	74.9	62.6	-------
Average	104.1	98.3	97.9	100.0	97.5	92.9	93.3	83.5	70.6	[1]59.4

[1] Average for 7 months.

Table 2 shows the total number of employees on the 15th day each of July, 1931, and June and July, 1932, and total pay roll for the entire months.

In these tabulations data for the occupational group reported as executives, officials, and staff assistants are omitted.

TABLE 2.—EMPLOYMENT AND EARNINGS OF RAILROAD EMPLOYEES, JULY, 1931, AND JUNE AND JULY, 1932

[From monthly reports of Interstate Commerce Commission. As data for only the more important occupations are shown separately, the group totals are not the sum of the items under the respective groups]

Occupations	Number of employees at middle of month			Total earnings		
	July 15, 1931	June 15, 1932	July 15, 1932	July, 1931	June, 1932	July, 1932
Professional, clerical, and general	222,232	184,282	179,628	$32,981,199	$24,733,183	$23,528,973
Clerks	120,974	97,626	94,929	16,943,637	12,346,867	11,710,240
Stenographers and typists	20,667	17,496	16,897	2,738,562	2,095,628	1,978,787
Maintenance of way and structures	303,825	233,848	223,977	27,777,398	17,551,482	16,273,505
Laborers, extra gang and work train	37,325	20,588	18,887	2,612,727	1,097,716	972,448
Laborers, track and roadway section	160,927	130,518	124,353	11,019,169	6,911,615	6,210,862
Maintenance of equipment and stores	342,915	273,015	266,898	42,733,661	27,932,230	26,137,432
Carmen	71,148	55,614	54,269	9,956,413	6,347,229	5,982,324
Machinists	45,533	38,186	36,987	6,566,881	4,441,722	4,107,611
Skilled trades helpers	74,867	58,840	57,593	7,787,611	4,892,184	4,532,813
Laborers (shops, engine houses, power plants, and stores)	28,088	22,370	21,944	2,594,117	1,714,154	1,652,048
Common laborers (shops, engine-houses, power plants, and stores)	36,962	28,728	28,109	2,703,310	1,692,170	1,543,246
Transportation, other than train, engine and yard	160,563	133,012	131,436	20,505,796	15,000,565	14,661,195
Station agents	27,725	25,862	25,762	4,444,470	3,660,255	3,583,088
Telegraphers, telephoners and towermen	19,491	16,858	16,904	3,081,037	2,317,599	2,329,644
Truckers (stations, warehouses, and platforms)	23,114	17,126	16,193	2,130,949	1,329,733	1,216,705
Crossing and bridge flagmen and gatemen	18,957	18,140	18,176	1,468,293	1,252,401	1,236,904
Transportation (yardmasters, switch tenders and hostlers)	17,553	13,850	13,518	3,430,951	2,295,725	2,261,163
Transportation, train and engine	247,304	195,880	193,151	49,020,282	32,095,069	31,939,264
Road conductors	28,250	22,854	22,646	6,846,815	4,639,928	4,677,796
Road brakemen and flagmen	54,745	43,350	43,032	9,339,305	6,027,799	6,059,594
Yard brakemen and yard helpers	41,199	32,626	32,098	6,843,683	4,261,174	4,141,755
Road engineers and motormen	33,453	26,586	26,484	9,023,482	6,045,639	6,089,258
Road firemen and helpers	34,406	27,406	27,092	6,536,824	4,323,529	4,355,774
All employees	1,294,392	1,033,887	1,008,608	176,449,287	119,608,254	114,801,532

RETAIL PRICES

Retail Prices of Food in August, 1932

THE following tables are compiled from simple averages of the actual selling prices received monthly by the Bureau of Labor Statistics of the United States Department of Labor from retail dealers.

Table 1 shows for 51 cities of the United States retail prices of food on August 15, 1931, and July 15, and August 15, 1932.

TABLE 1.—AVERAGE RETAIL PRICES OF FOOD IN THE UNITED STATES ON AUGUST 15, 1931, AND JULY 15, AND AUGUST 15, 1932

Article	Unit	Aug. 15, 1931	July 15, 1932	Aug. 15, 1932	Article	Unit	Aug. 15, 1931	July 15, 1932	Aug. 15, 1932
		Cts.	*Cts.*	*Cts.*			*Cts.*	*Cts.*	*Cts.*
Sirloin steak	Pound	39.5	35.3	34.9	Flour	Pound	3.4	3.2	3.1
Round steak	do	34.6	31.0	30.8	Corn meal	do	4.5	3.8	3.8
Rib roast	do	28.5	24.9	24.6	Rolled oats	do	7.9	7.6	7.5
Chuck roast	do	20.8	18.1	18.0	Corn flakes	8-oz. pkg.	8.8	8.5	8.4
Plate beef	do	13.3	11.2	11.2	Wheat cereal	28-oz. pkg.	24.0	22.5	22.5
Pork chops	do	33.3	25.5	23.3	Macaroni	Pound	16.5	15.2	15.2
Bacon sliced	do	36.6	23.7	23.9	Rice	do	8.1	6.6	6.5
Ham sliced	do	46.1	36.0	35.7	Beans, navy	do	7.8	5.0	4.9
Lamb, leg of	do	29.6	24.9	24.0	Potatoes	do	2.2	1.9	1.7
Hens	do	30.9	23.6	23.1	Onions	do	4.3	4.2	3.6
Salmon, red, canned	do	32.9	24.6	21.8	Cabbage	do	4.0	3.3	3.0
Milk, fresh	Quart	12.1	10.7	10.5	Pork and beans	16-oz. can	8.3	7.0	7.0
Milk, evaporated	14½-oz. can	8.0	6.5	6.3	Corn, canned	No. 2 can	13.2	10.5	10.5
Butter	Pound	34.4	23.9	26.8	Peas, canned	do	13.9	12.7	12.7
Margarine	do	18.1	14.5	14.5	Tomatoes, canned	do	10.0	9.5	9.4
Cheese	do	26.5	22.0	22.6	Sugar	Pound	5.7	5.0	5.1
Lard	do	12.8	8.5	8.9	Tea	do	75.4	70.3	70.1
Vegetable lard substitute	do	23.3	19.3	19.1	Coffee	do	32.4	29.7	29.6
					Prunes	do	11.7	9.4	9.3
					Raisins	do	11.2	11.5	11.6
Eggs, strictly fresh	Dozen	31.9	22.8	26.8	Bananas	Dozen	24.1	23.0	22.7
Bread	Pound	7.4	6.8	6.8	Oranges	do	37.3	32.8	30.7

Table 2 shows the trend in the retail cost of three important groups of food commodities, viz, cereals, meats, and dairy products, by years for 1913, 1920, 1928, 1929, 1930, 1931, and by months for 1931 and 1932. The articles included in these groups will be found in the May issue of this publication.

TABLE 2.—INDEX NUMBERS OF RETAIL COST OF CEREALS, MEATS, AND DAIRY PRODUCTS, FOR THE UNITED STATES, BY YEARS, FOR 1913, 1920, 1928, 1929, 1930, AND BY MONTHS, 1931 AND 1932

[Average cost in 1913=100.0]

Year and month	Cereals	Meats	Dairy products	Year and month	Cereals	Meats	Dairy products
1913	100.0	100.0	100.0	1931—Continued.			
1920	232.1	185.7	185.1	September	130.2	147.7	114.3
1928	167.2	179.2	150.0	October	129.8	142.7	117.0
1929	164.1	188.4	148.6	November	129.1	135.4	114.4
1930	158.0	175.8	136.5	December	127.8	129.3	111.4
1931: Average for year	135.9	147.0	114.6	1932:			
January	147.1	159.5	123.6	January	126.4	123.4	106.5
February	144.6	153.4	120.2	February	125.0	117.3	102.9
March	142.4	152.5	120.5	March	124.3	118.9	101.9
April	138.9	151.4	116.5	April	122.9	118.6	97.4
May	137.7	149.3	110.3	May	122.6	115.3	94.3
June	136.3	145.7	108.3	June	122.5	113.4	92.6
July	134.3	147.8	109.6	July	121.2	122.6	91.4
August	132.0	149.1	111.9	August	120.4	120.1	93.8

Index Numbers of Retail Prices of Food in the United States

In Table 3 index numbers are given which show the changes in the retail prices of specified food articles, and for all articles combined by years, for 1913, 1920, 1928, 1929, 1930, 1931, and by months for 1931 and 1932. These index numbers are based on the average for the year 1913 as 100.0.

Table 3.—INDEX NUMBERS OF RETAIL PRICES OF PRINCIPAL ARTICLES OF FOOD BY YEARS, 1913, 1920, 1928, 1929, 1930, 1931, AND BY MONTHS FOR 1931 AND 1932

[Average for year 1913=100.0]

Year and month	Sirloin steak	Round steak	Rib roast	Chuck roast	Plate beef	Pork chops	Bacon	Ham	Lamb, leg of	Hens	Milk	Butter
1913	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920	172.1	177.1	167.7	163.8	151.2	201.4	193.7	206.3	207.9	209.9	187.6	183.0
1928	188.2	188.3	176.8	174.4	157.0	165.7	163.0	196.7	208.5	175.6	159.6	147.5
1929	196.9	199.1	185.4	186.9	172.7	175.7	161.1	204.1	212.2	186.4	160.7	143.0
1930	182.7	184.8	172.7	170.0	155.4	171.0	156.7	198.5	185.7	166.7	157.3	120.4
1931	155.1	154.3	146.0	134.4	118.2	138.6	134.8	170.6	156.1	145.5	138.2	92.4
January	167.3	168.2	159.1	152.5	138.0	141.9	148.9	188.1	166.1	153.5	149.4	98.4
February	161.4	161.0	154.0	145.6	131.4	131.4	145.2	183.3	164.6	148.8	146.1	94.8
March	158.7	157.8	153.0	141.9	128.1	140.0	143.0	178.4	164.0	150.2	144.9	97.4
April	157.5	156.5	150.0	139.4	124.8	141.4	141.1	175.5	165.6	153.1	141.6	91.9
May	155.5	154.7	147.0	135.6	119.8	143.3	139.3	172.9	165.1	148.8	138.2	81.5
June	152.4	151.1	142.9	130.6	112.4	140.0	136.7	170.6	161.9	146.0	134.8	80.7
July	154.3	154.3	142.9	130.0	110.7	151.4	137.0	171.4	158.7	144.6	136.0	82.8
August	155.5	155.2	143.9	130.0	109.9	158.6	135.6	171.4	156.6	145.1	136.0	89.8
September	155.1	154.3	142.9	130.6	111.6	153.3	134.1	169.5	152.4	145.1	136.0	96.1
October	152.0	150.7	141.4	129.4	111.6	139.5	127.0	164.3	145.5	140.4	134.8	104.2
November	146.9	144.8	137.9	126.3	109.9	119.0	118.9	155.4	138.1	137.1	134.8	97.4
December	142.9	140.4	134.8	122.5	108.3	103.8	112.2	147.6	131.7	134.3	130.3	95.3
1932:												
January	137.4	135.0	129.8	115.6	101.7	99.5	101.5	139.8	127.5	131.0	129.2	84.8
February	130.7	127.4	123.2	108.1	97.5	91.0	96.7	136.4	125.4	127.2	128.1	77.0
March	129.9	127.8	123.2	108.1	95.9	102.4	95.2	136.1	131.7	128.2	127.0	77.0
April	131.5	128.3	122.7	108.8	95.9	102.4	92.2	134.9	135.4	124.9	123.6	70.0
May	129.9	127.4	120.2	106.5	91.7	94.8	88.5	131.2	132.3	120.7	121.3	65.5
June	129.1	127.4	118.7	105.6	88.4	93.8	85.9	129.7	128.6	113.1	121.3	62.9
July	139.0	139.0	125.8	113.1	92.6	121.4	87.8	133.8	131.7	110.8	120.2	62.4
August	137.4	138.1	124.2	112.5	92.6	111.0	88.5	132.7	127.0	108.5	118.0	70.0

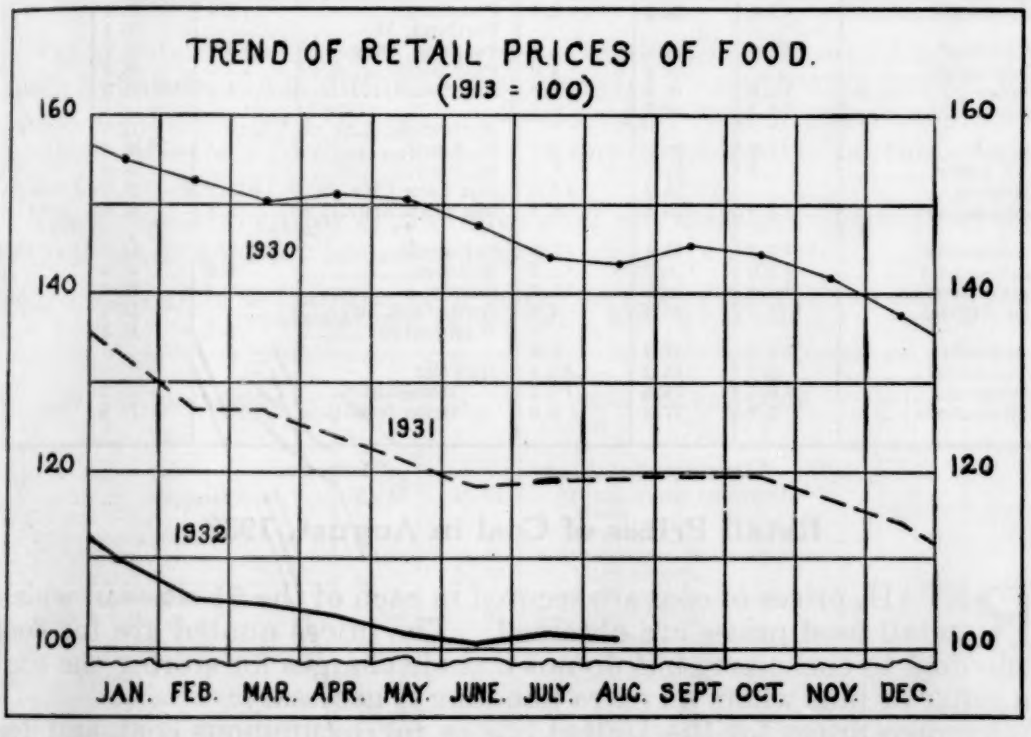
Year and month	Cheese	Lard	Eggs	Bread	Flour	Corn meal	Rice	Potatoes	Sugar	Tea	Coffee	All articles[1]
1913	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920	188.2	186.7	197.4	205.4	245.5	216.7	200.0	370.6	352.7	134.7	157.7	203.4
1928	174.2	117.7	134.5	162.5	163.6	176.7	114.9	158.8	129.1	142.3	165.1	154.3
1929	171.9	115.8	142.0	160.7	154.5	176.7	111.5	188.2	120.0	142.6	164.8	156.7
1930	158.8	107.6	118.8	155.4	142.4	176.7	109.2	211.8	112.7	142.5	136.2	147.1
1931	127.1	84.2	91.9	135.7	109.1	153.3	94.3	135.3	103.6	138.6	113.4	121.3
January	145.2	99.4	104.6	146.4	121.2	170.0	102.3	170.6	107.3	141.0	126.8	134.8
February	141.2	91.8	78.8	142.9	121.2	166.7	102.3	158.8	107.3	140.6	125.2	127.0
March	137.1	89.9	82.6	141.1	118.2	166.7	98.9	158.8	105.5	139.7	121.8	126.4
April	132.6	89.9	79.4	137.5	115.2	163.3	96.6	164.7	103.6	138.2	116.1	124.0
May	124.0	85.4	71.9	137.5	112.1	153.3	95.4	164.7	101.8	136.9	112.4	121.0
June	119.9	82.3	74.8	135.7	112.1	150.0	94.3	141.2	101.8	136.8	111.1	118.3
July	118.6	82.3	82.9	133.9	109.1	150.0	93.1	135.3	101.8	137.3	109.1	119.0
August	119.9	81.0	92.5	132.1	103.0	150.0	93.1	129.4	103.6	138.6	108.7	119.7
September	122.2	79.8	98.0	130.4	100.0	150.0	92.0	117.6	103.6	139.3	108.7	119.4
October	122.6	78.5	109.9	130.4	100.0	146.7	89.7	105.9	101.8	139.0	107.7	119.1
November	121.3	77.2	115.1	130.4	100.0	140.0	86.2	100.0	101.8	138.1	106.7	116.7
December	118.6	70.9	111.6	128.6	100.0	136.7	85.1	105.9	100.0	138.1	105.7	114.3
1932:												
January	115.4	63.9	85.8	126.8	100.0	133.3	85.1	100.0	98.2	136.2	104.4	109.3
February	110.4	59.5	70.1	125.0	100.0	133.3	83.9	100.0	96.4	135.3	104.0	105.3
March	107.7	57.6	61.2	125.0	97.0	130.0	81.6	100.0	94.5	134.7	103.4	105.0
April	105.4	55.1	58.0	123.2	97.0	130.0	79.3	100.0	92.7	133.1	102.3	103.7
May	101.8	52.5	58.0	123.2	97.0	130.0	77.0	105.9	89.1	132.4	100.7	101.3
June	100.9	49.4	60.3	123.2	97.0	130.0	75.9	117.6	89.1	130.5	99.7	100.1
July	99.5	53.8	66.1	121.4	97.0	126.7	75.9	111.8	90.9	129.2	99.7	101.0
August	102.3	56.3	77.7	121.4	93.9	126.7	74.7	100.0	92.7	128.9	99.3	100.8

[1] 22 articles in 1913–1920; 42 articles in 1921–1932.

Comparison of Retail Food Costs in 51 Cities

TABLE 4 shows for 39 cities the percentage of increase or decrease in the retail cost of food in the United States in August, 1932, compared with the average cost in the year 1913, in August, 1931, and July, 1932. For 12 other cities comparisons are given for the 1-year and the 1-month periods; these cities have been scheduled by the bureau at different dates since 1913. The percentage changes are based on actual retail prices secured each month from retail dealers and on the average consumption of these articles in each city. The consumption figures which have been used since January, 1921, are given in the Labor Review for March, 1921 (p. 26). Those used for prior dates are given in the Labor Review for November, 1918 (pp. 94 and 95).

Effort has been made by the bureau each month to have all schedules for each city included in the average prices. For the month



of August schedules were received from 99.5 per cent of the firms in the 51 cities from which retail prices of food are collected.

Out of about 1,207 food reports 7 were not received—1 each in Detroit, Portland (Oreg.), and San Francisco; 2 each in Los Angeles and Seattle.

Out of about 350 bread reports 1 was missing in Little Rock.

A perfect record is shown for the following-named cities: Atlanta, Baltimore, Birmingham, Boston, Bridgeport, Buffalo, Butte, Charleston (S. C.), Chicago, Cincinnati, Cleveland, Columbus, Dallas, Denver, Fall River, Houston, Indianapolis, Jacksonville, Kansas City, Louisville, Manchester, Memphis, Milwaukee, Minneapolis, Mobile, Newark, New Haven, New Orleans, New York, Norfolk, Omaha, Peoria, Philadelphia, Pittsburgh, Portland (Me.), Providence, Richmond, Rochester, St. Louis, St. Paul, Salt Lake City, Savannah, Scranton, Springfield (Ill.), and Washington.

TABLE 4.—PERCENTAGE CHANGE IN THE RETAIL COST OF FOOD IN AUGUST, 1932, COMPARED WITH THE COST IN JULY, 1932, AUGUST, 1931, AND WITH THE COST IN THE YEAR 1913, BY CITIES

City	Percentage increase, August, 1932, compared with 1913	Percentage decrease, August, 1932, compared with—		City	Percentage increase, August, 1932, compared with 1913	Percentage decrease, August, 1932, compared with—	
		August, 1931	July, 1932			August, 1931	July, 1932
United States	0.8	15.8	0.2	Minneapolis	[1] 1.7	19.3	1.5
				Mobile		18.5	[2] 1.5
Atlanta	[1] .7	16.7	.3	Newark	4.3	14.9	2.1
Baltimore	4.8	16.1	1.5	New Haven	7.3	14.1	.4
Birmingham	.8	13.4	[2] 1.7	New Orleans	[1] .2	12.4	[2] 2.6
Boston	2.7	17.0	.7				
Bridgeport		13.6	1.0	New York	9.2	13.7	.1
				Norfolk		11.8	[2] .5
Buffalo	6.0	13.6	.6	Omaha	[1] 8.4	19.9	1.0
Butte		18.5	1.0	Peoria		14.9	1.3
Charleston, S. C	4.1	16.0	.5	Philadelphia	4.2	18.5	.8
Chicago	10.4	17.8	.7				
Cincinnati	[1] 1.4	22.3	2.6	Pittsburgh	[1] 2.1	18.4	[2] .2
				Portland, Me		16.1	1.5
Cleveland	[1] 3.0	15.8	1.9	Portland, Oreg	[1] 5.2	12.2	[2] .2
Columbus		18.2	3.0	Providence	3.0	16.5	1.0
Dallas	[1] 6.0	16.9	[2] 1.0	Richmond	4.0	14.3	[2] 1.0
Denver	[1] 4.7	13.7	[2] .5				
				Rochester		11.3	[2] .1
Detroit	[1] 4.2	20.7	4.7	St. Louis	.5	18.0	.5
Fall River	.3	12.7	[2] .3	St. Paul		18.6	3.5
Houston		18.2	[2] 1.0	Salt Lake City	[1] 15.8	20.6	3.4
Indianapolis	[1] 1.9	15.5	2.3	San Francisco	4.4	11.0	[2] 1.1
Jacksonville	[1] 5.7	15.4	[2] 3.8	Savannah		15.3	[2] 3.2
Kansas City	[1] 2.0	16.7	[2] 1.9	Scranton	6.0	15.9	.5
Little Rock	[1] 8.8	16.0	[2] 1.7	Seattle	[1] .2	13.7	1.3
Los Angeles	[1] 14.5	20.7	4.6	Springfield, Ill		15.4	.3
				Washington	8.7	16.3	[2] .6
Louisville	[1] 6.8	17.3	[2] .2				
Manchester	3.6	15.2	[2] 1.4	Hawaii:			
Memphis	[1] 6.6	15.4	[2] 1.2	Honolulu		15.2	1.3
Milwaukee	2.9	17.3	2.0	Other localities		15.8	1.7

[1] Decrease. [2] Increase.

Retail Prices of Coal in August, 1932

RETAIL prices of coal are secured in each of the 51 cities in which retail food prices are obtained. The prices quoted are for coal delivered to consumers but do not include charges for storing the coal in cellar or bins where an extra handling is necessary.

Average prices for the United States for bituminous coal and for stove and chestnut sizes of Pennsylvania anthracite are computed from the quotations received from retail dealers in all cities where these coals are sold for household use.

Table 1 shows the average prices of coal per ton of 2,000 pounds and index numbers for the United States on August 15, 1932, in comparison with the average prices on August 15, 1931, and July 15, 1932, together with the percentage change in the year and in the month.

TABLE 1.—AVERAGE RETAIL PRICE PER 2,000 POUNDS OF COAL FOR THE UNITED STATES, AND PER CENT OF CHANGE ON AUGUST 15, 1932, COMPARED WITH AUGUST 15, 1931, AND JULY 15, 1932

Article	Average retail price on—			Per cent of increase (+) or decrease (−) Aug. 15, 1932 compared with—	
	Aug. 15, 1931	July 15, 1932	Aug. 15, 1932	Aug. 15, 1931	July 15, 1932
Pennsylvania anthracite:					
Stove—					
Average price per 2,000 pounds	$14.76	$13.37	$13.50	−8.5	+1.0
Index (1913=100.0)	191.1	173.0	174.8		
Chestnut—					
Average price per 2,000 pounds	$14.73	$13.16	$13.28	−9.8	+.9
Index (1913=100.0)	186.1	166.2	167.8		
Bituminous:					
Average price per 2,000 pounds	$8.11	$7.50	$7.52	−7.3	+.3
Index (1913=100.0)	149.3	138.0	138.4		

Table 2 shows average retail prices of coal on July 15 and August 15, 1932, by cities. In addition to the prices for Pennsylvania anthracite, prices are shown for Colorado, Arkansas, and New Mexico anthracite in those cities where these coals form any considerable portion of the sales for household use.

The prices shown for bituminous coal are averages of prices of the several kinds sold for household use.

TABLE 2.—AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON JULY 15 AND AUGUST 15, 1932

City, and kind of coal	July 15, 1932	Aug. 15, 1932
Atlanta, Ga.:		
Bituminous, prepared sizes	$5.64	$5.82
Baltimore, Md.:		
Pennsylvania anthracite—		
Stove	12.25	12.50
Chestnut	11.75	12.00
Bituminous, run of mine—		
High volatile	6.86	7.07
Birmingham, Ala.:		
Bituminous, prepared sizes	4.96	4.98
Boston, Mass.:		
Pennsylvania anthracite—		
Stove	13.25	13.25
Chestnut	13.00	13.00
Bridgeport, Conn.:		
Pennsylvania anthracite—		
Stove	13.00	13.00
Chesnut	13.00	13.00
Buffalo, N. Y.:		
Pennsylvania anthracite—		
Stove	11.88	12.15
Chestnut	11.63	11.90
Butte, Mont.:		
Bituminous, prepared sizes	9.89	9.85
Charleston, S. C.:		
Bituminous, prepared sizes	9.50	9.50
Chicago, Ill.:		
Pennsylvania anthracite—		
Stove	15.30	15.44
Chestnut	15.05	15.13
Bituminous, prepared sizes—		
High volatile	7.53	7.44
Low volatile	9.22	9.42
Run of mine, low volatile	6.95	6.92
Cincinnati, Ohio:		
Bituminous, prepared sizes—		
High volatile	5.00	5.00
Low volatile	6.75	6.75
Cleveland, Ohio:		
Pennsylvania anthracite—		
Stove	$13.63	$13.56
Chestnut	13.38	13.31
Bituminous, prepared sizes—		
High volatile	6.19	6.33
Low volatile	8.00	8.00
Columbus, Ohio:		
Bituminous, prepared sizes—		
High volatile	5.15	5.14
Low volatile	6.25	6.25
Dallas, Tex.:		
Arkansas anthracite, egg	14.00	13.50
Bituminous, prepared sizes	10.00	9.75
Denver, Colo.:		
Colorado anthracite—		
Furnace, 1 and 2, mixed	14.75	14.50
Stove, 3 and 5 mixed	14.75	14.50
Bituminous, prepared sizes	7.95	7.89
Detroit, Mich.:		
Pennsylvania anthracite—		
Stove	12.92	13.00
Chestnut	12.71	12.79
Bituminous, prepared sizes—		
High volatile	5.91	6.04
Low volatile	6.95	6.86
Run of mine, low volatile	6.31	6.25
Fall River, Mass.:		
Pennsylvania anthracite—		
Stove	14.25	14.00
Chestnut	14.00	13.75
Houston, Tex.:		
Bituminous, prepared sizes	9.20	9.40
Indianapolis, Ind.:		
Bituminous, prepared sizes—		
High volatile	4.79	4.80
Low volatile	6.71	7.17
Run of mine, low volatile	5.55	5.85

TABLE 2.—AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON JULY 15 AND AUGUST 15, 1932—Continued

City, and kind of coal	July 15, 1932	Aug. 15, 1932
Jacksonville, Fla.:		
Bituminous, prepared sizes	$9.00	$9.00
Kansas City, Mo.:		
Arkansas anthracite—		
Furnace	10.63	10.63
Stove No. 4	12.17	12.17
Bituminous, prepared sizes	5.75	5.78
Little Rock, Ark.:		
Arkansas anthracite—egg	11.75	11.50
Bituminous, prepared sizes	8.17	8.00
Los Angeles, Calif.:		
Bituminous, prepared sizes	15.13	15.25
Louisville, Ky.:		
Bituminous, prepared sizes—		
High volatile	4.68	4.69
Low volatile	6.75	6.69
Manchester, N. H.:		
Pennsylvania anthracite—		
Stove	14.50	14.50
Chestnut	14.50	14.50
Memphis, Tenn.:		
Bituminous, prepared sizes	6.94	6.54
Milwaukee, Wis.:		
Pennsylvania anthracite—		
Stove	14.45	14.65
Chestnut	14.20	14.40
Bituminous, prepared sizes—		
High volatile	6.97	6.99
Low volatile	8.75	8.78
Minneapolis, Minn.:		
Pennsylvania anthracite—		
Stove	16.75	16.95
Chestnut	16.50	16.70
Bituminous, prepared sizes—		
High volatile	9.62	9.60
Low volatile	11.87	11.87
Mobile, Ala.:		
Bituminous, prepared sizes	7.31	7.17
Newark, N. J.:		
Pennsylvania anthracite—		
Stove	11.75	11.99
Chestnut	11.50	11.74
New Haven, Conn.:		
Pennsylvania anthracite—		
Stove	13.65	13.65
Chestnut	13.65	13.65
New Orleans, La.:		
Bituminous, prepared sizes	8.07	8.07
New York, N. Y.:		
Pennsylvania anthracite—		
Stove	12.02	12.25
Chestnut	11.77	12.00
Norfolk, Va.:		
Pennsylvania anthracite—		
Stove	12.50	12.50
Chestnut	12.50	12.50
Bituminous, prepared sizes—		
High volatile	6.50	6.50
Low volatile	7.50	7.50
Run of mine, low volatile	6.50	6.50
Omaha, Nebr.:		
Bituminous, prepared sizes	8.73	8.77
Peoria, Ill.:		
Bituminous, prepared sizes	6.10	5.96
Philadelphia, Pa.:		
Pennsylvania anthracite—		
Stove	11.00	11.17
Chestnut	10.75	10.92
Pittsburgh, Pa.:		
Pennsylvania anthracite, chestnut	$12.88	$12.75
Bituminous, prepared sizes	4.04	4.00
Portland, Me.:		
Pennsylvania anthracite—		
Stove	15.36	15.36
Chestnut	15.12	15.12
Portland, Oreg.:		
Bituminous, prepared sizes	11.96	12.09
Providence, R. I.:		
Pennsylvania anthracite—		
Stove	[1] 14.00	[1] 14.00
Chestnut	[1] 13.75	[1] 13.75
Richmond, Va.:		
Pennsylvania anthracite—		
Stove	12.88	13.00
Chestnut	12.88	13.00
Bituminous, prepared sizes—		
High volatile	6.67	6.67
Low volatile	7.43	7.65
Run of mine, low volatile	6.39	6.50
Rochester, N. Y.:		
Pennsylvania anthracite—		
Stove	12.38	12.75
Chestnut	12.13	12.50
St. Louis, Mo.:		
Pennsylvania anthracite—		
Stove	14.72	14.85
Chestnut	14.72	14.85
Bituminous, prepared sizes	5.16	4.80
St. Paul, Minn.:		
Pennsylvania anthracite—		
Stove	16.75	16.95
Chestnut	16.50	16.70
Bituminous, prepared sizes—		
High volatile	9.55	9.49
Low volatile	11.87	11.87
Salt Lake City, Utah:		
Bituminous, prepared sizes	7.39	7.39
San Francisco, Calif.:		
New Mexico anthracite, Cerillos egg	25.00	25.00
Colorado anthracite, egg	24.50	24.50
Bituminous, prepared sizes	15.00	15.00
Savannah, Ga.:		
Bituminous, prepared sizes	[2] 8.28	[2] 8.53
Scranton, Pa.:		
Pennsylvania anthracite—		
Stove	8.63	8.83
Chestnut	8.35	8.55
Seattle, Wash.:		
Bituminous, prepared sizes	9.01	9.70
Springfield, Ill.:		
Bituminous, prepared sizes	4.39	4.34
Washington, D. C.:		
Pennsylvania anthracite—		
Stove	[3] 13.56	[3] 13.85
Chestnut	[3] 13.26	[3] 13.55
Bituminous, prepared sizes—		
High volatile	[3] 8.29	[3] 8.29
Low volatile	[3] 9.86	[3] 9.86
Run of mine, mixed	[3] 7.50	[3] 7.56

[1] The average price of coal delivered in bins is 50 cents higher than here shown. Practically all coal is delivered in bins.

[2] All coal sold in Savannah is weighed by the city. A charge of 10 cents per ton or half ton is made. This additional charge has been included in the above price.

[3] Per ton of 2,240 pounds.

WHOLESALE PRICES

Index Numbers of Wholesale Prices, 1913 to August, 1932

THE following table presents the index numbers of wholesale prices by groups of commodities, by years, from 1913 to 1931, inclusive, and by months from January, 1931, to date:

INDEX NUMBERS OF WHOLESALE PRICES

[1926=100.0]

Year and month	Farm products	Foods	Hides and leather products	Textile products	Fuel and lighting	Metals and metal products	Building materials	Chemicals and drugs	House-furnishing goods	Miscellaneous	All commodities
1913	71.5	64.2	68.1	57.3	61.3	90.8	56.7	80.2	56.3	93.1	69.8
1914	71.2	64.7	70.9	54.6	56.6	80.2	52.7	81.4	56.8	89.9	68.1
1915	71.5	65.4	75.5	54.1	51.8	86.3	53.5	112.0	56.0	86.9	69.5
1916	84.4	75.7	93.4	70.4	74.3	116.5	67.6	160.7	61.4	100.6	85.5
1917	129.0	104.5	123.8	98.7	105.4	150.6	88.2	165.0	74.2	122.1	117.5
1918	148.0	119.1	125.7	137.2	109.2	136.5	98.6	182.3	93.3	134.4	131.3
1919	157.6	129.5	174.1	135.3	104.3	130.9	115.6	157.0	105.9	139.1	138.6
1920	150.7	137.4	171.3	164.8	163.7	149.4	150.1	164.7	141.8	167.5	154.4
1921	88.4	90.6	109.2	94.5	96.8	117.5	97.4	115.0	113.0	109.2	97.6
1922	93.8	87.6	104.6	100.2	107.3	102.9	97.3	100.3	103.5	92.8	96.7
1923	98.6	92.7	104.2	111.3	97.3	109.3	108.7	101.1	108.9	99.7	100.6
1924	100.0	91.0	101.5	106.7	92.0	106.3	102.3	98.9	104.9	93.6	98.1
1925	109.8	100.2	105.3	108.3	96.5	103.2	101.7	101.8	103.1	109.0	103.5
1926	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927	99.4	96.7	107.7	95.6	88.3	96.3	94.7	96.8	97.5	91.0	95.4
1928	105.9	101.0	121.4	95.5	84.3	97.0	94.1	95.6	95.1	85.4	96.7
1929	104.9	99.9	109.1	90.4	83.0	100.5	95.4	94.2	94.3	82.6	95.3
1930	88.3	90.5	100.0	80.3	78.5	92.1	89.9	89.1	92.7	77.7	86.4
1931	64.8	74.6	86.1	66.3	67.5	84.5	79.2	79.3	84.9	69.8	73.0
1931:											
January	73.1	80.7	88.7	71.3	73.3	86.9	83.8	84.5	88.3	72.2	78.2
February	70.1	78.0	86.9	70.9	72.5	86.5	82.5	83.3	88.1	71.5	76.8
March	70.6	77.6	87.6	70.0	68.3	86.4	82.5	82.9	88.0	72.0	76.0
April	70.1	76.3	87.5	68.2	65.4	85.7	81.5	81.3	87.9	71.5	74.8
May	67.1	73.8	87.6	67.4	65.3	85.0	80.0	80.5	86.8	70.5	73.2
June	65.4	73.3	88.0	66.6	62.9	84.4	79.3	79.4	86.4	69.7	72.1
July	64.9	74.0	89.4	66.5	62.9	84.3	78.1	78.9	85.7	69.7	72.0
August	63.5	74.6	88.7	65.5	66.5	83.9	77.6	76.9	84.9	68.3	72.1
September	60.5	73.7	85.0	64.5	67.4	83.9	77.0	76.3	82.7	68.2	71.2
October	58.8	73.3	82.5	63.0	67.8	82.8	76.1	75.6	81.0	66.6	70.3
November	58.7	71.0	81.6	62.2	69.4	82.6	76.2	76.1	80.9	68.7	70.2
December	55.7	69.1	79.8	60.8	68.3	82.2	75.7	76.1	78.5	66.8	68.6
1932:											
January	52.8	64.7	79.3	59.9	67.9	81.8	74.8	75.7	77.7	65.6	67.3
February	50.6	62.5	78.3	59.8	68.3	80.9	73.4	75.5	77.5	64.7	66.3
March	50.2	62.3	77.3	58.7	67.9	80.8	73.2	75.3	77.1	64.7	66.0
April	49.2	61.0	75.0	57.0	70.2	80.3	72.5	74.4	76.3	64.7	65.5
May	46.6	59.3	72.5	55.6	70.7	80.1	71.5	73.6	74.8	64.4	64.4
June	45.7	58.8	70.8	53.9	71.6	79.9	70.8	73.1	74.7	64.2	63.9
July	47.9	60.9	68.6	52.7	72.3	79.2	69.7	73.0	74.0	64.3	64.5
August	49.1	61.8	69.7	54.0	72.1	80.1	69.6	73.3	73.6	64.6	65.2

INDEX NUMBERS OF SPECIFIED GROUPS OF COMMODITIES, AUGUST, 1931, AND JULY AND AUGUST, 1932

[1926=100.0]

Group	August, 1931	July, 1932	August, 1932
Raw materials	64.1	54.7	55.7
Semimanufactured articles	68.3	55.5	57.9
Finished products	76.4	70.5	70.7
Nonagricultural commodities	73.9	68.0	68.5
All commodities other than farm products and foods	74.2	69.7	70.1

Weekly Index Numbers of Wholesale Prices

A SUMMARIZATION of the weekly index numbers for the 10 major groups of commodities and for all commodities combined as issued during the month of August will be found in the following statement:

INDEX NUMBERS OF WHOLESALE PRICES FOR THE WEEKS OF AUGUST, 1932

[1926=100.0]

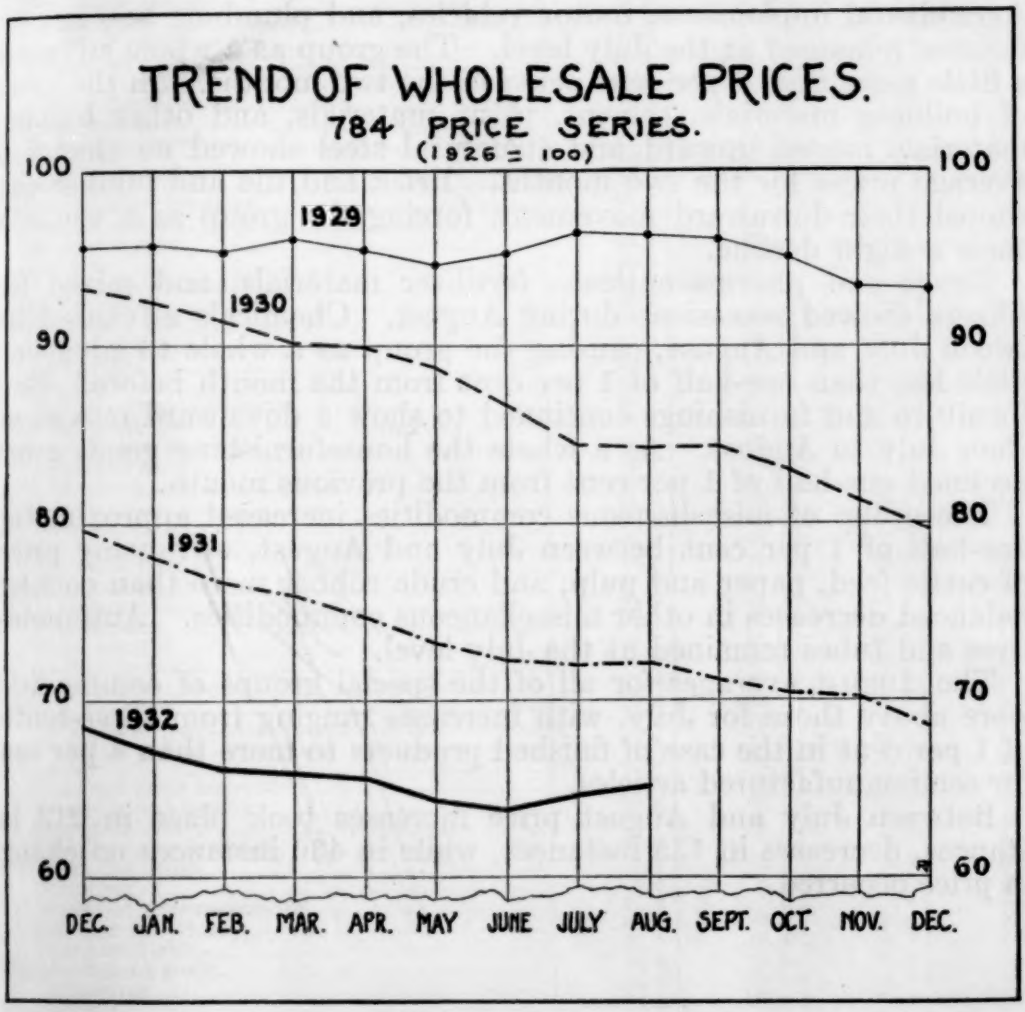
Group	Week ending—			
	Aug. 6	Aug. 13	Aug. 20	Aug. 27
All commodities	64.8	65.2	65.4	65.2
Farm products	47.9	49.4	49.9	49.5
Foods	61.9	62.5	61.8	61.6
Hides and leather products	69.9	70.2	70.6	70.8
Textile products	52.5	53.0	53.7	54.0
Fuel and lighting	73.0	72.9	72.8	72.7
Metals and metal products	79.2	79.4	80.1	80.0
Building materials	69.6	69.4	69.6	69.6
Chemicals and drugs	73.4	73.4	73.5	73.0
House-furnishing goods	74.9	74.9	74.9	74.9
Miscellaneous	64.5	64.7	64.7	64.4

Wholesale Price Trends During August, 1932

THE index number of wholesale commodity prices as computed by the Bureau of Labor Statistics of the United States Department of Labor shows a marked increase from July, 1932, to August, 1932. This index number, which includes 784 commodities or price series weighted according to the importance of each article, and based on the average prices for the year 1926 as 100.0, averaged 65.2 for August, as compared with 64.5 for July, showing an advance of more than

1 per cent between the two months. When compared with August, 1931, with an index number of 72.1, a decrease of 9½ per cent has been recorded in the 12 months.

The farm-products group made the greatest gains, advancing 2½ per cent in the month period. Increases were recorded in the average prices of barley, corn, rye, wheat, calves, poultry, cotton, eggs, hay, and peanuts. Decreases in the average prices of oats, cows, hogs, fresh apples, lemons, oranges, leaf tobacco, and onions, were shown for August.



Among foods, price increases were reported for butter, cheese, rye and wheat flour, fresh and cured beef, cured pork, veal, coffee, lard, raw and granulated sugar, and most canned vegetables. On the other hand, condensed and evaporated milk, rolled oats, canned fruits, lamb, mutton, fresh pork, and salt averaged lower than in the month before. The group as a whole increased 1½ per cent in August when compared with July.

The hides and leather products group increased slightly more than 1½ per cent during the month, due to sharp increases in hides and skins. Decreases were shown for leather and other leather products, with boots and shoes showing practically no change in average prices. Textile products as a whole increased 2½ per cent from July to August, due to marked advances for cotton goods, knit goods,

silk and rayon, and other textile products. The subgroup of woolen and worsted goods declined slightly, while clothing remained at the July level.

In the group of fuel and lighting materials decreases in the average prices of bituminous coal and petroleum products more than offset increases in the prices of anthracite coal, coke, electricity, and gas. As a whole the group showed a net decline of less than one-half of 1 per cent from July to August.

Metals and metal products showed an upward tendency for August due to increases in iron and steel products and nonferrous metals. Agricultural implements, motor vehicles, and plumbing and heating fixtures remained at the July level. The group as a whole advanced a little more than 1 per cent between the two months. In the group of building materials, cement, paint materials, and other building materials moved upward, and structural steel showed no change in average prices for the two months. Brick and tile and lumber continued their downward movement, forcing the group as a whole to show a slight decline.

Drugs and pharmaceuticals, fertilizer materials, and mixed fertilizers showed recessions during August. Chemicals advanced between July and August, causing the group as a whole to advance a little less than one-half of 1 per cent from the month before. Both furniture and furnishings continued to show a downward movement from July to August. As a whole the housefurnishing goods group declined one-half of 1 per cent from the previous month.

The group of miscellaneous commodities increased approximately one-half of 1 per cent between July and August, advancing prices of cattle feed, paper and pulp, and crude rubber more than counterbalanced decreases in other miscellaneous commodities. Automobile tires and tubes remained at the July level.

The August averages for all of the special groups of commodities were above those for July, with increases ranging from three-tenths of 1 per cent in the case of finished products to more than 4 per cent for semimanufactured articles.

Between July and August price increases took place in 213 instances, decreases in 135 instances, while in 436 instances no change in price occurred.

INDEX NUMBERS OF WHOLESALE PRICES BY GROUPS AND SUBGROUPS OF COMMODITIES

[1926=100.0]

Commodity groups and subgroups	August, 1931	July, 1932	August, 1932	Purchasing power of the dollar, August, 1932
All commodities	72.1	64.5	65.2	$1.534
Farm products	63.5	47.9	49.1	2.037
Grains	44.8	36.7	38.2	2.618
Livestock and poultry	67.0	54.1	52.8	1.894
Other farm products	67.3	48.4	50.8	1.969
Foods	74.6	60.9	61.8	1.618
Butter, cheese, and milk	82.2	58.2	60.2	1.661
Cereal products	70.9	65.7	66.0	1.515
Fruits and vegetables	73.4	59.7	55.6	1.799
Meats	76.0	62.0	61.9	1.616
Other foods	69.6	58.5	62.1	1.610
Hides and leather products	88.7	68.6	69.7	1.435
Boots and shoes	93.5	84.4	84.4	1.185
Hides and skins	69.1	33.5	39.3	2.545
Leather	90.3	60.0	60.0	1.667
Other leather products	101.4	83.7	82.3	1.215
Textile products	65.5	52.7	54.0	1.852
Clothing	75.9	66.0	66.0	1.515
Cotton goods	64.0	50.0	52.6	1.901
Knit goods	59.2	47.8	48.5	2.062
Silk and rayon	43.7	26.2	29.5	3.390
Woolen and worsted goods	67.4	53.6	53.4	1.873
Other textile products	74.4	66.5	67.4	1.484
Fuel and lighting materials	66.5	72.3	72.1	1.387
Anthracite coal	92.2	84.5	86.0	1.163
Bituminous coal	83.7	81.6	81.3	1.230
Coke	81.5	76.3	76.7	1.304
Electricity	98.4	105.8	(1)	----------
Gas	103.2	108.3	(1)	----------
Petroleum products	37.5	49.7	48.9	2.045
Metals and metal products	83.9	79.2	80.1	1.248
Agricultural implements	94.3	84.9	84.9	1.178
Iron and steel	82.4	77.2	78.7	1.271
Motor vehicles	94.7	95.3	95.3	1.049
Nonferrous metals	60.1	47.0	48.5	2.062
Plumbing and heating	83.8	67.1	67.1	1.490
Building materials	77.6	69.7	69.6	1.437
Brick and tile	82.9	75.9	75.2	1.330
Cement	75.8	77.3	79.0	1.266
Lumber	66.9	56.9	55.5	1.802
Paint and paint materials	78.4	66.8	67.2	1.488
Plumbing and heating	83.8	67.1	67.1	1.490
Structural steel	81.7	81.7	81.7	1.224
Other building materials	83.7	77.9	78.3	1.277
Chemicals and drugs	76.9	73.0	73.3	1.364
Chemicals	80.5	78.9	79.7	1.255
Drugs and pharmaceuticals	61.9	57.6	57.0	1.754
Fertilizer materials	74.4	66.8	66.4	1.506
Mixed fertilizers	78.7	68.8	68.3	1.464
Housefurnishing goods	84.9	74.0	73.6	1.359
Furnishings	81.7	75.1	74.8	1.337
Furniture	88.6	73.0	72.6	1.377
Miscellaneous	68.3	64.3	64.6	1.548
Automobile tires and tubes	46.0	40.1	40.1	2.494
Cattle feed	50.8	42.2	47.4	2.110
Paper and pulp	80.6	76.2	76.3	1.311
Rubber, crude	11.2	6.1	7.9	12.658
Other miscellaneous	86.4	84.5	84.2	1.188
Raw materials	64.1	54.7	55.7	1.795
Semimanufactured articles	68.3	55.5	57.9	1.727
Finished products	76.4	70.5	70.7	1.414
Nonagricultural commodities	73.9	68.0	68.5	1.460
All commodities other than farm products and foods	74.2	69.7	70.1	1.427

[1] Data not yet available.

COST OF LIVING

Cost of Living of Wage-Earning Women in Richmond, Va.

DATA concerning the cost of living of wage-earning women in Richmond, Va., were collected in the early summer of 1931 by the School of Social Service of William and Mary College. Nineteen students visited the working girls personally and secured budgets for 71 (all of whom were at least 75 per cent self-supporting), covering details of their income and expenditures for the year ending March 31, 1931. An agent of the United States Bureau of Labor Statistics assisted the student investigators by advising with them and by inspecting the budgets as they were brought in. The report here presented was compiled by the Bureau of Labor Statistics.

Although this investigation was limited in scope and is incomplete in some respects, it is believed that the results are fairly representative of living conditions among working women. Statements of expenditures are of necessity approximate as few women keep written accounts, but on the whole the figures given undoubtedly show the facts with a close degree of accuracy.

The data are classified in most cases according to class of work, namely, clerical workers and factory workers. The clerical group (47 workers) was made up largely of stenographers, but also included secretaries, cashiers, telephone operators, bookkeepers, and social workers. The factory group (24 workers) included tobacco and paper-box factory workers, a meat packer, and a worker in an engraving establishment.

Characteristics of Workers

Age and conjúgal condition.—Sixty-nine per cent of the woman workers canvassed were in the 20-to-30-year age group, the average for all being 24 years. The ages of the 47 clerical workers ranged from 17 to 45 years and averaged 25 years, and those of the factory workers ranged from 17 to 35 years and averaged 22 years. Seven women were over 30 and under 45 years, and 14 were under 20 years of age. The age of the women living at home averaged 23 years and that of the women living away from home 26 years. One of the workers was a widow, 2 were married but not living with their husbands, and 68 were single women.

Length of time in city and in industry.—Eighteen women had lived in Richmond less than 5 years, 16 from 5 to 10 years, 18 from 10 to 20 years, and 19 from 20 to 29 years, the average number of years for the 47 clerical workers being 12.5 years, for the 24 factory workers 11.7 years, and for all the women 12.2 years. These figures include a few residing in the city all their lives. Thirty-five women were living at home and 36 were living away from home.

For 36 women the number of years spent in industry was less than 5 years, for 25 women from 5 to 10 years, and for 10 women from 10 to 22 years, the average for the 47 clerical workers being 6 years, for the 24 factory workers 4.6 years, and for all women 5.6 years.

Education.—All of the 71 women reported grade-school education, averaging 7.1 years. Sixty-five had an average of 3.3 years in high school and 17 an average of 2.2 years in college, there being 40 who were high-school graduates and 4 who were college graduates. Twenty-four women averaged one year at business day school and four women had business training, averaging 2.3 years, in night school.

Degree of self-support.—No woman was included unless she was at least 75 per cent self-supporting. Data obtained regarding the assistance these women received from their families when employed as well as when unemployed showed that 26, or 37 per cent, divided equally between clerical and factory workers, received such assistance. Of these women 14 lived at home and 12 away from home. The assistance consisted of money, board and room, clothing, laundry, insurance, telephone, and other items. Gifts received were evaluated at what they would have cost the women had they been purchased for cash. They were listed as expenses and were also included as part of income.

For the 13 clerical workers this assistance had an average value of $72 for the year and for the 13 factory workers $34, while for all 26 women it was $53. The average earnings, as distinguished from total income, of the 13 clerical workers receiving family assistance were $884, and of the 13 factory workers, $660.

The rather large average reported in the clerical group for assistance from the family was caused by amounts ranging from $140 to $200, received by 3 women living away from home. Two sisters, whose earnings were slightly over $1,300 each, received from their family $190 and $200, respectively, in board, room, clothing, and money; it was evident from their budgets that the family was in comfortable circumstances and able to assist the daughters. The third woman received $130 in money while working, and board and room valued at $10 while not working. Six women received less than $17, 11 received from $20 to $47.50, and 6 received from $64 to $92.

Earnings and Income

The earnings of the 47 clerical workers ranged from $480 to $1,560 and averaged $1,082, while the total income from all sources ranged from $520 to $1,659 and averaged $1,145. For the 24 factory workers the earnings ranged from $420 to $1,230 and averaged $667, while the income ranged from $441 to $1,267 and averaged $705. Considering all 71 woman workers, the earnings averaged $942 and the income $996, the earnings being 94.5 per cent of the income. In only two instances was a secondary line of work undertaken by the women. One clerical worker earned $180 as a singer, and a factory worker earned $30 as an operator in a beauty parlor during evenings. The smallest addition to the regular earnings was 50 cents and the largest amount was $339, or 20 per cent of the total income of that person.

Table 1 shows the average earnings and the average income for the 71 wage-earning women in Richmond.

TABLE 1.—AVERAGE YEARLY EARNINGS AND INCOME OF WAGE-EARNING WOMEN IN RICHMOND, VA., BY INCOME GROUPS

Income group	Number of workers			Weeks worked			Earnings		
	Clerical	Factory	Total	Clerical workers	Factory workers	Total	Clerical workers	Factory workers	Total
Under $600	3	8	11	49.3	45.0	46.2	$515.00	$492.25	$498.45
$600 and under $800	5	10	15	46.4	45.5	45.8	682.20	669.03	673.42
$800 and under $1,000	9	5	14	50.3	49.5	50.0	870.89	829.31	856.04
$1,000 and under $1,200	9	------	9	51.1	------	51.1	1,035.78	----------	1,035.78
$1,200 and under $1,400	8	1	9	51.8	48.0	51.3	1,250.93	1,230.00	1,248.60
$1,400 and under $1,700	13	------	13	50.3	------	50.3	1,440.92	----------	1,440.92
All incomes	47	24	71	50.2	46.3	48.9	1,082.03	666.87	941.69

Income group	Income from other sources			Total income		
	Clerical workers	Factory workers	Total	Clerical workers	Factory workers	Total
Under $600	$36.17	$23.08	$26.65	$551.17	$515.33	$525.10
$600 and under $800	59.75	42.85	48.48	741.95	711.88	721.90
$800 and under $1,000	53.36	51.93	52.85	924.25	881.24	908.89
$1,000 and under $1,200	61.90	----------	61.90	1,097.68	----------	1,097.68
$1,200 and under $1,400	39.89	37.00	39.56	1,290.82	1,267.00	1,288.17
$1,400 and under $1,700	93.64	----------	93.64	1,534.56	----------	1,534.56
All incomes	63.43	37.91	54.80	1,145.46	704.78	996.49

Time Lost During Year

A TOTAL of 1,265.5 days of lost time during the year was reported by the 71 women covered by the study, 21 clerical workers reporting an average of 23.1 days and 20 factory workers an average of 39 days. The averages for all the clerical and all the factory workers were 10.3 and 32.5, respectively. The greatest proportion of lost time for both clerical and factory workers was from unemployment—36.4 per cent for clerical workers and 73.5 per cent for factory workers—the period of unemployment ranging from 12 to 54 days for clerical employees and from 22 to 72 days for factory employees.

Vacations without pay, ranging from 6 to 12 days for clerical workers and from 5½ to 48 days for factory workers, accounted for 24.5 and 15.3 per cent respectively of the lost time. Twenty-three clerical workers reported paid vacations, one of three weeks and the others of from one to two weeks, but these are not here reported as lost time.

Illness caused 22.2 per cent of the lost time for the clerical workers and 9.7 per cent for the factory workers, the periods ranging from 6 to 48 days for the clerical workers and from 2 to 22 days for the factory workers. In clerical occupations women are seldom docked for short periods of illness.

Twenty-four factory and 42 clerical workers reported no change of positions during the year. One clerical worker, however, had 7 different positions, 2 had 3, and 2 had 2 positions.

Table 2 shows the number and per cent of days lost for all workers, by causes.

TABLE 2.—NUMBER AND PER CENT OF DAYS LOST PER YEAR BY WOMAN WORKERS IN RICHMOND, VA., BY CAUSES

Cause	Days lost by clerical workers		Days lost by factory workers		Days lost by all workers	
	Number	Per cent of total	Number	Per cent of total	Number	Per cent of total
Unemployment	177	36.4	573	73.5	750	59.3
Vacation without pay	119	24.5	119½	15.3	238½	18.8
Illness	108	22.2	76	9.7	184	14.5
Other	82	16.9	11	1.4	93	7.3
Total	486	100.0	779½	100.0	1,265½	100.0

Expenditures

A COMPARISON of the six major items of expenditure for these working women during the year is presented in Table 3. Primary expenses, consisting of board, room, food, fuel, light, and laundry, constituted the principal element of expense, forming 42.2 per cent of the total expenditures for all workers. The amount expended for these items by the factory workers ($313.59) was lower than that expended by the clerical workers ($459.73), but formed a larger percentage of the total expenditures of the factory employees. The same was true of the clothing item, next in importance. The most essential things must be provided even though the income be small, and if necessary the expenditure must be cut elsewhere. Primary expenses and clothing absorbed 70.6 per cent of the total expenditures.

There was only a small difference in the amounts expended for health in the two groups, the average for all the women being $28.24 or 2.9 per cent of the expenditures. For recreation and amusement both the amount and percentage of total expenditures were higher for the clerical group and averaged 4.7 per cent of the total expenditures for all workers.

The clerical workers spent more than four times as much for education and advancement as the factory workers, and the per cent of expenditures was 2.9 higher. For all women the average amount was $38.72 or 4 per cent of the yearly expenditures.

TABLE 3.—AVERAGE AMOUNT AND PER CENT OF SPECIFIED ITEMS OF YEARLY EXPENDITURE OF WORKING WOMEN IN RICHMOND, VA., BY OCCUPATIONAL GROUP

Item of expenditure	Clerical workers (47)—average income $1,145.46		Factory workers (24)—average income $704.78		Total workers (71)—average income $996.49	
	Average yearly expense	Per cent of yearly expense	Average yearly expense	Per cent of yearly expense	Average yearly expense	Per cent of yearly expense
Primary expenses [1]	$459.73	41.4	$313.59	44.8	$410.33	42.2
Clothing	306.16	27.6	216.41	30.9	275.83	28.4
Health	28.96	2.6	26.83	3.8	28.24	2.9
Recreation and amusement	57.22	5.2	23.11	3.3	45.69	4.7
Education and advancement	51.98	4.7	12.75	1.8	38.72	4.0
Miscellaneous	205.53	18.5	107.88	15.4	172.52	17.8
Total expenses	1,109.58	100.0	700.58	100.0	971.33	100.0

[1] Board, room, food, fuel, light, and laundry.

A summary of expenditures by income groups is presented in Table 4. For the group with an income under $600, 52.1 per cent of all expenditures was for primary expenses, while for the highest income group, $1,400 and under $1,700, 38.3 per cent of their expenditures were for primary expenses. For all incomes clothing absorbed 28.4 per cent of the total expenditures, varying as between the income groups from 24.8 per cent to 31.7 per cent.

The expense for health appears small, that of the different income groups varying from $14.01 to $37.71. As regards recreation and amusement the cost tends to increase with advanced income, but the per cent of expenditures for these purposes varies around 5 per cent for most of the income groups. The expenditure for education and advancement appears to increase in amount and also in the per cent of expenditures as the incomes advance, the amount for all groups averaging 4 per cent of the total expenditures. Miscellaneous expenditures naturally show the greatest diversity. The amount rises as the income increases.

TABLE 4.—AVERAGE AMOUNT AND PER CENT OF YEARLY EXPENSES OF WAGE-EARNING WOMEN IN RICHMOND, VA., SPENT FOR PRINCIPAL ITEMS OF COST OF LIVING, BY INCOME GROUPS

Income group	Number of women	Average expenditures for—					
		Primary expenses	Clothing	Health	Recreation and amusement	Education and advancement	Miscellaneous
Under $600	11	$285.96	$152.71	$30.25	$12.34	$6.84	$61.16
$600 and under $800	15	301.26	229.69	30.01	35.68	12.59	116.50
$800 and under $1,000	14	380.57	269.42	27.46	43.12	21.37	177.25
$1,000 and under $1,200	9	483.49	286.94	24.57	39.79	41.31	195.61
$1,200 and under $1,400	9	535.00	312.39	14.01	60.64	79.87	256.53
$1,400 and under $1,700	13	536.52	407.14	37.71	81.97	84.25	252.15
All incomes	71	410.33	275.83	28.24	45.69	38.72	172.52
		Per cent of total expenditures					
Under $600	11	52.1	27.8	5.5	2.3	1.3	11.1
$600 and under $800	15	41.5	31.7	4.1	4.9	1.7	16.1
$800 and under $1,000	14	41.4	29.3	3.0	4.7	2.3	19.3
$1,000 and under $1,200	9	45.1	26.8	2.3	3.7	3.9	18.3
$1,200 and under $1,400	9	42.5	24.8	1.1	4.8	6.4	20.4
$1,400 and under $1,700	13	38.3	29.1	2.7	5.9	6.0	18.0
All incomes	71	42.2	28.4	2.9	4.7	4.0	17.8

Table 5 shows by income groups the number of women having a surplus or a deficit at the end of the year or whose income and outgo showed an even balance. Thirteen women lived on their income but saved nothing, while 23 women had living expenses above their income and ended the year with an average deficit of $70.79. There were 35 women who lived on less than their income and were able to save an average of $97.57 each. Considering the 71 woman workers the average surplus was only $48.10.

TABLE 5.—NUMBER OF WAGE-EARNING WOMEN IN RICHMOND, VA., LIVING ON, ABOVE, AND BELOW INCOME DURING YEAR

Income group	Average yearly expense			Surplus					
				Number having			Average amount		
	Clerical workers	Factory workers	Total	Clerical workers	Factory workers	Total	Clerical workers	Factory workers	Total
Under $600	$573.50	$540.17	$549.26	------	2	2	------	$28.73	$28.73
$600 and under $800	751.54	712.82	725.73	1	3	4	$45.45	44.94	45.07
$800 and under $1,000	970.71	826.49	919.20	3	3	6	64.63	92.93	78.78
$1,000 and under $1,200	1,071.71	------	1,071.71	5	------	5	86.47	------	86.47
$1,200 and under $1,400	1,261.74	1,232.00	1,258.43	5	1	6	86.92	35.00	78.27
$1,400 and under $1,700	1,399.73	------	1,399.73	12	------	12	150.22	------	150.22
All incomes	1,109.58	700.58	971.33	26	9	35	111.88	56.23	97.57

Income group	Deficit						Neither surplus nor deficit		
	Number having			Average amount			Number having		
	Clerical workers	Factory workers	Total	Clerical workers	Factory workers	Total	Clerical workers	Factory workers	Total
Under $600	2	5	7	$33.50	$51.24	$46.17	1	1	2
$600 and under $800	2	4	6	46.72	36.05	39.61	2	3	5
$800 and under $1,000	5	1	6	122.39	5.00	102.83	1	1	2
$1,000 and under $1,200	2	------	2	99.31	------	99.31	2	------	2
$1,200 and under $1,400	1	------	1	202.00	------	202.00	2	------	2
$1,400 and under $1,700	1	------	1	49.80	------	49.80	------	------	0
All incomes	13	10	23	94.06	40.54	70.79	8	5	13

Primary Expenses

Included in "primary expenses" are the cost of board and room, extra meals, fruit, candy, sodas, fuel and lighting, and laundry and laundry supplies, and for those keeping house the rent of the apartment and the food expense are included.

The average cost of these items for the clerical workers and the factory workers is shown in Table 6. As a class these women spent $303.86 each for board and room during the year, $17.27 for rent of an apartment, $16.30 for board, $44.14 for extra meals, etc. The cost of board and room for the 65 women who boarded averaged $6.39 per week—$7.05 for the clerical workers and $5.20 for the 23 factory workers. The cost of board and room for the 35 women living at home ($6.29) was practically the same as that for the women living away from home ($6.53). Room and board absorbed an average of 82.6 per cent of the primary expenses for women living at home and 81.9 per cent for women living away from home.

The clerical workers buy the largest amount of extra meals, averaging $59.51 for the year—more than three and one-half times the amount reported by the factory workers, which may be explained by the lower wage of the latter. No extra meals were purchased by 31 women—17 clerical and 14 factory workers. The amount spent for extra meals averaged 11.1 per cent of the primary expenses for women living at home and 10.5 per cent for women living away from

home. Expenditures for fruit, candy, sodas, etc., were slightly higher for the factory girls. Eleven women reported no expense for these items. For women boarding and rooming away from home these items consumed 4.0 per cent of the primary expenses as compared with 5.3 per cent for women living at home.

For the six women living in apartments or housekeeping rooms and in more than one place during the year, the expense for fuel and light averaged $23.68 during the year. One woman who paid for room and board also paid a fuel and light bill of $12, but for the other women this expense was included in room and board.

The institutions and homes in which some of these women and girls lived gave them the privilege of doing their own laundry. Twenty-seven women reported a laundry expense ranging from 5 cents to $1.25 a week, and averaging $21 for the year. No expense for laundry was reported for the other 44 women, the cost of board and room including laundry. Laundry for women at home consumed 1 per cent of the total primary expenses as compared with 2.8 per cent for women living away from home.

TABLE 6.—AVERAGE COST PER PERSON AND PER CENT OF TOTAL COST OF PRINCIPAL ITEMS OF PRIMARY EXPENSES FOR YEAR OF WAGE-EARNING WOMEN IN RICHMOND, VA.

Item	Clerical workers (47)		Factory workers (24)		Total workers (71)	
	Average expense	Per cent of total expense	Average expense	Per cent of total expense	Average expense	Per cent of total expense
Board and room	$327.83	71.3	$256.92	81.9	$303.86	74.1
Apartment or housekeeping rooms	23.02	5.0	6.00	1.9	17.27	4.2
Food	19.78	4.3	9.50	3.0	16.30	4.0
Extra meals	59.51	12.9	14.02	4.5	44.14	10.8
Fruit, candy, soda, etc	17.94	3.9	21.06	6.7	18.99	4.6
Fuel and lighting	2.12	.5	1.08	.3	1.77	.4
Laundry and laundry supplies	9.53	2.1	5.01	1.6	8.01	2.0
Total	459.73	100.0	313.59	100.0	410.33	100.0

Clothing

The wardrobe is necessarily a large item in the working women's budget. Clothing constituted 28.4 per cent of the expenditures for the 71 workers, the average expenditure for the clerical workers being $306.16, or 27.6 per cent of the total expenses, and for the factory workers $216.41, or 30.9 per cent of the total. Although the amount spent by the factory workers was less than that by the clerical workers, the per cent of expenditures was greater because of the lower income.

The average cost of clothing by income groups for the 71 workers advanced regularly from $152.71, or 27.8 per cent of total expenditures, for the lowest income group (under $600), to $407.14, or 29.1 per cent of total expenditures, for the highest income group ($1,400 to $1,700). Although the cost increased, the per cent of expenditures fluctuated as between the several groups. On the whole, there was not much variation in the prices paid for the clothing articles by the clerical and factory workers.

These women buy on an average a winter coat and a spring coat every other year, and during the year they buy on an average 5 of the better dresses; 3 sport or outing dresses; 2 work dresses or uniforms;

2 house dresses; 5 hats; 4 slips or petticoats; 2 combinations, dance sets or chemises; 5 pairs of bloomers; 3 nightgowns or pajamas; 25 pairs of silk or rayon stockings; 4 pairs of dress shoes and 2 pairs of work shoes; 3 pairs of gloves and 2 handbags.

TABLE 7.—AVERAGE QUANTITY OF AND EXPENDITURE FOR CLOTHING, BY ITEMS, PURCHASED PER WOMAN IN ONE YEAR BY WORKING WOMEN IN RICHMOND, VA.

Article and class of workers	All women (47 clerical and 24 factory workers)			Women having expenditures for specified articles			
	Average number of articles per woman	Average expenditure per woman	Average expenditure per article	Number	Per cent of all women	Average number of articles per woman	Average expenditure per woman
Clerical workers							
Hats	4.4	$16.67	$3.82	47	100.0	4.4	$16.67
Coats, winter	.5	33.26	62.53	25	53.2	1.0	62.53
Coats, spring	.7	14.33	19.82	34	72.3	1.0	19.82
Raincoats	.1	.43	5.11	4	8.5	1.0	5.11
Suits and ensembles	.7	11.25	15.11	27	57.4	1.3	19.59
Sweaters	.8	1.63	2.07	23	48.9	1.6	3.33
Skirts	.5	1.87	3.52	21	44.7	1.2	4.19
Blouses	1.5	3.01	2.02	35	74.5	2.0	4.04
Dresses:							
Dress	3.6	39.97	11.18	46	97.9	3.7	40.84
Sport or outing	3.4	29.37	8.52	40	85.1	4.1	34.51
Work or uniform	1.1	6.50	6.11	14	29.8	3.6	21.82
House, smocks or aprons	1.5	1.82	1.19	29	61.7	2.5	2.95
Furs	.1	3.19	37.50	4	8.5	1.0	37.50
Cleaning, pressing, and repairing	-------	13.98	-------	46	97.9	-------	14.28
Slips and petticoats	3.7	6.37	1.71	46	97.9	3.8	6.51
Corsets	.6	1.49	2.69	13	27.7	2.0	5.38
Brassieres	3.5	2.09	.60	38	80.9	4.3	2.58
Combinations, dance sets, chemises, etc	1.9	3.42	1.81	27	57.4	3.3	5.96
Vests	.4	.38	.93	7	14.9	2.7	2.52
Bloomers and step-ins	4.7	4.71	1.00	43	91.5	5.1	5.15
Nightgowns and pajamas	3.3	6.04	1.85	46	97.9	3.3	6.17
Union suits	(1)	.09	2.00	1	2.1	2.0	4.00
Kimonos and bathrobes	.7	3.53	5.18	27	57.4	1.2	6.14
Hose, silk or rayon	24.1	26.81	1.11	47	100.0	24.1	26.81
Hose, cotton	.1	.05	.83	2	4.3	1.5	1.25
Shoes, dress	3.4	21.88	6.43	47	100.0	3.4	21.88
Shoes, work	2.0	11.54	5.77	35	74.5	2.7	15.50
Bedroom slippers	.6	.96	1.73	23	48.9	1.1	1.96
Rubbers or galoshes	.5	.99	2.11	22	46.8	1.0	2.11
Shoe repairing	-------	4.59	-------	39	83.0	-------	5.54
Shoe shines	1.2	.12	.10	4	8.5	14.0	1.40
Gloves	3.0	6.05	1.99	47	100.0	3.0	6.05
Scarfs	.8	1.24	1.58	23	48.9	1.6	2.54
Umbrellas	.3	1.53	4.50	16	34.0	1.0	4.50
Hand bags and purses	1.8	4.72	2.64	40	85.1	2.1	5.54
Handkerchiefs	13.2	2.36	.18	39	83.0	15.9	2.84
Belts, ties, buckles, etc	-------	.68	-------	20	42.6	-------	1.59
Jewelry	-------	13.13	-------	30	63.8	-------	20.57
Other clothing	-------	4.12	-------	45	95.7	-------	4.31
Factory workers							
Hats	5.0	13.67	2.76	24	100.0	5.0	13.67
Coats, winter	.6	14.10	24.18	14	58.3	1.0	24.18
Coats, spring	.7	10.80	16.20	15	62.5	1.1	17.28
Raincoats	(1)	.25	5.95	1	4.2	1.0	5.95
Suits and ensembles	.6	6.31	10.10	12	50.0	1.3	12.62
Sweaters	.7	1.31	1.96	10	41.7	1.6	3.14
Skirts	.6	1.25	2.14	9	37.5	1.6	3.33
Blouses	.8	1.36	1.63	11	45.8	1.8	2.97
Dresses:							
Dress	4.7	35.26	7.56	24	100.0	4.7	35.26
Sport or outing	2.8	14.30	5.12	19	79.2	3.5	18.06
Work or uniform	3.0	4.07	1.36	14	58.3	5.1	6.97
House, smocks or aprons	1.4	.91	.66	7	29.2	4.7	3.13
Furs	.1	5.00	40.00	3	12.5	1.0	40.00
Cleaning, pressing, and repairing	-------	5.73	-------	19	79.2	-------	7.24
Slips and petticoats	4.7	6.03	1.29	24	100.0	4.7	6.03
Corsets	.5	2.08	4.55	6	25.0	1.8	8.33

[1] Less than one-tenth.

TABLE 7.—AVERAGE QUANTITY OF AND EXPENDITURE FOR CLOTHING, BY ITEMS, PURCHASED PER WOMAN IN ONE YEAR BY WORKING WOMEN IN RICHMOND, VA.—Continued

Article and class of workers	All women (47 clerical and 24 factory workers)			Women having expenditures for specified articles			
	Average number of articles per woman	Average expenditure per woman	Average expenditure per article	Number	Per cent of all women	Average number of articles per woman	Average expenditure per woman
Factory workers—Continued							
Brassieres	5.5	2.46	$0.45	22	91.7	6.0	$2.69
Combinations, dance sets, chemises, etc.	2.4	3.55	1.47	17	70.8	3.4	5.02
Vests	.7	.25	.37	4	16.7	4.0	1.48
Bloomers and step-ins	4.5	4.10	.90	22	91.7	5.0	4.47
Nightgowns and pajamas	2.6	3.25	1.24	23	95.8	2.7	3.40
Kimonos and bathrobes	.5	2.61	5.70	10	41.7	1.1	6.27
Hose, silk or rayon	26.8	27.90	1.04	24	100.0	26.8	27.90
Hose, cotton	.5	.10	.20	1	4.2	12.0	2.40
Shoes, dress	3.7	17.91	4.77	23	95.8	3.9	18.68
Shoes, work	2.2	9.20	4.09	15	62.5	3.6	14.72
Bedroom slippers	.7	.94	1.41	10	41.7	1.6	2.26
Rubbers or galoshes	.4	.71	1.70	10	41.7	1.0	1.70
Shoe repairing	-------	3.71	-------	22	91.7	-------	4.05
Shoe shines	1.9	.23	.12	2	8.3	22.5	2.75
Gloves	2.7	4.31	1.62	24	100.0	2.7	4.31
Scarfs	.5	.69	1.28	10	41.7	1.3	1.66
Umbrellas	.1	.21	1.67	3	12.5	1.0	1.67
Hand bags and purses	1.5	3.12	2.08	19	79.2	1.9	3.94
Handkerchiefs	14.4	1.55	.11	21	87.5	16.5	1.78
Belts, ties, buckles, etc.	-------	.67	-------	15	62.5	-------	1.07
Jewelry	-------	4.28	-------	18	75.0	-------	5.70
Other clothing	-------	2.24	-------	21	87.5	-------	2.56
All workers							
Hats	4.6	15.66	3.43	71	100.0	4.6	15.66
Coats, winter	.5	26.79	48.76	39	54.9	1.0	48.76
Coats, spring	.7	13.14	18.66	49	69.0	1.0	19.04
Raincoats	.1	.37	5.28	5	7.0	1.0	5.28
Suits and ensembles	.7	9.58	13.61	39	54.9	1.3	17.44
Sweaters	.7	1.52	2.04	33	46.5	1.6	3.27
Skirts	.5	1.66	3.03	30	42.3	1.3	3.93
Blouses	1.3	2.45	1.93	46	64.8	2.0	3.78
Dresses:							
Dress	3.9	38.37	9.73	70	98.6	4.0	38.92
Sport or outing	3.2	24.27	7.53	59	83.1	3.9	29.21
Work or uniform	1.7	5.68	3.30	28	39.4	4.4	14.40
House, smocks or apron	1.5	1.51	1.02	36	50.7	2.9	2.98
Furs	.1	3.80	38.57	7	9.9	1.0	38.57
Cleaning, pressing, and repairing	-------	11.19	-------	65	91.5	-------	12.22
Slips and petticoats	4.0	6.25	1.55	70	98.6	4.1	6.34
Corsets	.5	1.69	3.24	19	26.8	1.9	6.32
Brassieres	4.2	2.22	.53	60	84.5	5.0	2.62
Combinations, dance sets, chemises, etc.	2.1	3.47	1.67	44	62.0	3.3	5.59
Vests	.5	.33	.67	11	15.5	3.2	2.14
Bloomers and step-ins	4.6	4.51	.97	65	91.5	5.1	4.92
Nightgowns and pajamas	3.0	5.10	1.68	69	97.2	3.1	5.24
Union suits	(1)	.06	2.00	1	1.4	2.0	4.00
Kimonos and bathrobes	.6	3.22	5.32	37	52.1	1.2	6.18
Hose, silk or rayon	25.0	27.18	1.09	71	100.0	25.0	27.18
Hose, cotton	.2	.07	.33	3	4.2	5.0	1.63
Shoes, dress	3.5	20.54	5.83	70	98.6	3.6	20.83
Shoes, work	2.1	10.75	5.16	50	70.4	3.0	15.26
Bedroom slippers	.6	.95	1.61	33	46.5	1.3	2.05
Rubbers or galoshes	.5	.89	1.98	32	45.1	1.0	1.98
Shoe repairing	-------	4.29	-------	61	85.9	-------	5.00
Shoe shines	1.4	.16	.11	6	8.5	16.8	1.85
Gloves	2.9	5.46	1.87	71	100.0	2.9	5.46
Scarfs	.7	1.06	1.50	33	46.5	1.5	2.27
Umbrellas	.3	1.08	4.05	19	26.8	1.0	4.05
Hand bags and purses	1.7	4.18	2.47	59	83.1	2.0	5.02
Handkerchiefs	13.6	2.09	.15	60	84.5	16.1	2.47
Belts, ties, buckles, etc.	-------	.68	-------	35	49.3	-------	1.37
Jewelry	-------	10.14	-------	48	67.6	-------	15.00
Other clothing	-------	3.49	-------	66	93.0	-------	3.75

[1] Less than one-tenth.

Considering the cost of these articles for all women, the average price of the winter coat was $48.76 ($62.53 for the clerical worker and $24.18 for the factory worker). The price of the spring coat averaged $18.66 ($19.82 for the clerical worker and $16.20 for the factory worker). Five clerical workers reported buying coats ranging in price from $100 to $150. The better dresses averaged $9.73, the sport or outing dresses $7.53, the work dresses or uniforms $3.30, and the house dresses $1.02. The average price of slips or petticoats was $1.55; combinations, dance sets, or chemises, $1.67; bloomers, 97 cents; nightgowns or pajamas, $1.68; silk or rayon hosiery, $1.09; dress shoes, $5.83; work shoes, $5.16; gloves, $1.87; and hand bags, $2.47.

For all the women, 41 per cent of their total clothing expense was for outer garments, 20 per cent for footwear, 8 per cent for underwear, and 6 per cent for headwear.

In Table 7 the articles purchased by the clerical and the factory workers, and the average number purchased, the average expense per person, and the average cost per article as applied to the total number of women in each group are also reported. Another set of figures applies to the women who during the year actually purchased the articles in question, together with the average expenditure for such articles.

Health Expenses

Under "health expenses" are included physician, surgeon, hospital, nurse, X-ray and other treatments, dentist, oculist, or optician, and medicine. The average expense for health for all women was $28.24, or 2.9 per cent of total expenditures (see Table 3). This cost ranged from $14.01, or 1.1 per cent of the expenditure, for the income group $1,200, and under $1,400, to $37.71 or 2.7 per cent of the expenditures, for the highest income group, $1,400 and under $1,700. In the four lower income groups, including 49 workers, the health expense ranged from $24.57, or 2.3 per cent of the expenditures, to $30.25 or 5.5 per cent of the expenditures.

Four workers received free medical care. One had hospital treatment for three weeks and another had a tonsil operation. Free examination and hospital care for 28 days and 5 office calls to the physician constituted the free medical attention for the other two women. Only 60 of the 71 women had health expense.

Table 8 gives the expenses for the various items included under this heading. In the first section the expenses are divided among the 71 women to get the general average per woman while the second section applies only to the 60 women who had health expenses.

TABLE 8.—AVERAGE YEARLY EXPENDITURE BY CLERICAL AND FACTORY WORKERS IN RICHMOND, VA., FOR HEALTH, BY ITEMS

Item	Average expense per person			Women having specified expense								
				Clerical workers			Factory workers			Total		
	Clerical workers (47)	Factory workers (24)	Total (71)	No.	Per cent of total	Average expense	No.	Per cent of total	Average expense	No.	Per cent of total	Average expense
Physician	$8.67	$8.73	$8.69	24	51.1	$16.98	13	54.2	$16.12	37	52.1	$16.68
Surgeon	1.06	5.21	2.46	1	2.1	50.00	1	4.2	125.00	2	2.8	87.50
Hospital	.98	2.50	1.49	2	4.3	23.00	1	4.2	60.00	3	4.2	35.33
Nurse		.21	.07				1	4.2	5.00	1	1.4	5.00
X-ray and other treatments	1.06	.42	.85	1	2.1	50.00	1	4.2	10.00	2	2.8	30.00
Dentist	8.76	5.19	7.55	29	61.7	14.19	12	50.0	10.38	41	57.7	13.07
Oculist or optician	4.20	1.81	3.39	12	25.5	16.46	3	12.5	14.50	15	21.1	16.07
Medicine	4.22	2.77	3.73	31	66.0	6.40	13	54.2	5.11	44	62.0	6.02
Total	28.96	26.83	28.24	41	87.2	33.19	19	79.2	33.89	60	84.5	33.41

Recreation and Amusement

The cost of recreation and amusement includes expenses for motion pictures, theater, concerts and lectures, excursion trips, sports, and vacation. All except 2 of the 71 women reported some expense for one or more of these forms of recreation. The proportion of the total expenses devoted to recreation and amusement shows no regularity of increase with increasing income, the general average being 4.7 per cent. The amounts and proportion of total expenditures are higher for the clerical group.

The highest amounts reported are costs of vacation, which include living expenses for the time spent away from home. Thirty-one women reported no vacation, but in a few instances the lack of vacation was compensated by the amount spent for other pleasure. The vacation expense for the whole group of 71 women averaged $24.99, and for the 40 women having this expense the cost averaged $44.35. The cost of vacation for the clerical workers as a whole averaged $33.49, and ranged from $14.50 to $200, while for the factory women it averaged $8.35, and ranged from $2.29 to $73.

The cost of motion pictures averaged $10.77 for all the 71 women. Ten workers reported no expense for this item. Several of the workers, however, reported attendance with escorts who paid the cost thereof. Economy is clearly indicated by the amounts spent for theater, concerts, etc., averaging only 85 cents for all women, and an average of $3.75 for the 16 women reporting this expense.

Table 9 presents the average yearly expense for recreation and amusement for the 71 women. It also shows the number and average expense of these items for the women who had these expenses.

TABLE 9.—AVERAGE YEARLY EXPENDITURE FOR RECREATION AND AMUSEMENT OF CLERICAL AND FACTORY WORKERS IN RICHMOND, VA.

Item	Average expense per person			Persons having specified expense								
				Clerical workers			Factory workers			Total		
	Clerical workers (47)	Factory workers (24)	Total (71)	No.	Per cent of total	Average expense	No.	Per cent of total	Average expense	No.	Per cent of total	Average expense
Vacation, including railroad fare	$33.49	$8.35	$24.99	35	74.5	$44.97	5	20.8	$40.06	40	56.3	$44.35
Motion pictures	10.75	10.81	10.77	40	85.1	12.63	21	87.5	12.35	61	85.9	12.53
Regular theater, concerts, lectures, etc	1.22	.10	.85	14	29.8	4.11	2	8.3	1.25	16	22.5	3.75
Excursion trips	7.25	2.98	5.81	26	55.3	13.11	10	41.7	7.15	36	50.7	11.45
Other (dancing, bowling, golf, tennis, baseball, football, swimming, etc.)	4.51	.88	3.28	28	59.6	7.58	5	20.8	4.20	33	46.5	7.06
Total	57.22	23.11	45.69	47	100.0	57.22	22	91.7	25.21	69	97.2	47.02

Education and Advancement

The classification "education and advancement" includes expenses for music and music lessons, elocution and art lessons, school tuition, magazines, books, papers, etc., and church and other religious organizations.

Sixty-eight of the 71 women reported some expense for one or more of these items. The figures show the usual tendency of the amount as well as the per cent of expenditures to increase as income increases. The lowest income group (see Table 4) spent an average of $6.84, or 1.3 per cent of the total expenditures, and the highest income group $84.25, or 6 per cent of the total, on this class of expense.

One woman reported an expense for elocution and art lessons, 8 for school tuition, and 4 for music. Ten of the clerical workers and 14 of the factory workers reported no expense for magazines, books, and papers. Thirty women paid less than $10, 13 paid from $10 to $20, and four paid over $25 for this item, the largest amount reported being $100.

Of the 71 women, 66, or 93 per cent, were church supporters, contributing an average of $26.07 during the year. This expense, divided among the 71 women, averaged $24.24. Five clerical workers reported no contribution for this item, and six contributed amounts ranging from $100 to $160.

In Table 10 is given the yearly cost of each of the items included in this classification of expenditures.

TABLE 10.—YEARLY EXPENDITURE PER PERSON FOR EDUCATION AND ADVANCEMENT BY WAGE-EARNING WOMEN IN RICHMOND, VA.

Item	Average expense per person			Persons having specified expenditure								
				Clerical workers			Factory workers			Total		
	Clerical workers (47)	Factory workers (24)	Total (71)	No.	Per cent of total	Average expense	No.	Per cent of total	Average expense	No.	Per cent of total	Average expense
Music and music lessons	$2.51	------	$1.66	4	8.5	$29.55	----	------	------	4	5.6	$29.55
Elocution and art lessons	.85	------	.56	1	2.1	40.00	----	------	------	1	1.4	40.00
School tuition	7.98	$0.34	5.40	7	14.9	53.57	1	4.2	$8.20	8	11.3	47.90
Magazines, books, papers, etc	8.33	3.97	6.86	37	78.7	10.58	10	41.7	9.53	47	66.2	10.36
Church and other religious organizations	32.30	8.44	24.24	42	89.4	36.15	24	100.0	8.44	66	93.0	26.07
Total	51.98	12.75	38.72	44	93.6	55.52	24	100.0	12.75	68	95.8	40.43

Miscellaneous Items

Under "Miscellaneous" are grouped a number of expenditures which seem to represent a steadily rising proportion of the living costs in all income groups. The following items each form more than 3 per cent of the total for all women and together comprise 73.1 per cent:

	Per cent
Gifts	22.9
Street-car and bus fare to and from work	14.7
Contributions to dependents	8.5
Life insurance	8.3
Room furnishings	6.8
Toilet articles and preparations	6.8
Beauty-parlor costs	5.1

Table 11 itemizes the miscellaneous expenditures of these women. As in other tables, two classes of averages are shown, one for the entire group and the other for such women only as had the specified expenditures.

Insurance.—Probably the most common method of saving among working women is through some form of insurance. For the 35 women carrying life insurance the premiums averaged $29.06, for the 24 clerical workers they averaged $34.14, and for the 11 factory workers $17.97. For those carrying life insurance the amount expended was 8.3 per cent of the total miscellaneous expenditures.

Two women were covered only by group insurance; one paid a premium of $7.20 on a policy of $1,000 and the other $16 on a $2,000 policy, the remainder of the premiums being paid by their employers. Two others, who carried other straight life or endowment policies, were also covered by group-insurance policies, on which they paid $7.20 each, the remainder of the premiums being paid by their employers. One clerical worker, whose income was $1,559, carried two 20-payment life-insurance policies and one endowment policy, the total premiums amounting to $157.

The life-insurance expenditure as divided over all 71 women was $14.32 per capita; for the 47 clerical workers it amounted to $17.43, and for the 24 factory workers it was $8.24.

TABLE 11.—AVERAGE YEARLY EXPENDITURE PER PERSON FOR MISCELLANEOUS ITEMS BY WAGE-EARNING WOMEN IN RICHMOND, VA.

Item	Average expense per person			Persons having specified expense								
				Clerical workers (47)			Factory workers (24)			Total (71)		
	Clerical workers (47)	Factory workers (24)	Total (71)	No.	Per cent of total	Average expense	No.	Per cent of total	Average expense	No.	Per cent of total	Average expense
Insurance:												
Life	$17.43	$8.24	$14.32	24	51.1	$34.14	11	45.8	$17.97	35	49.3	$29.06
Accident	.56	-------	.37	3	6.4	8.80	----	-------	-------	3	4.2	8.80
Association dues	2.48	1.73	2.23	24	51.1	4.86	13	54.2	3.18	37	52.1	4.27
Charity	6.07	2.09	4.73	28	59.6	10.20	11	45.8	4.55	39	54.9	8.61
Gifts	48.15	22.53	39.49	44	93.6	51.43	20	83.3	27.04	64	90.1	43.81
Dependents	17.74	8.56	14.64	7	14.9	11.91	3	12.5	68.51	10	14.1	103.95
Street-car fare to and from work	18.44	21.29	19.40	24	51.1	36.10	15	62.5	34.07	39	54.9	35.32
Bus fare to and from work	9.14	.05	6.07	12	25.5	35.79	1	4.2	1.28	13	18.3	33.13
Automobile to and from work	-------	4.16	1.41	----	-------	-------	2	8.3	49.96	2	2.8	49.96
Other street-car fare	3.65	4.16	3.82	17	36.2	10.10	10	41.7	9.98	27	38.0	10.05
Other bus fare	2.92	.63	2.15	18	38.3	7.64	5	20.8	3.01	23	32.4	6.63
Taxis	.11	-------	.07	1	2.1	5.00	----	-------	-------	1	1.4	5.00
Room furnishings	14.57	6.19	11.74	27	57.4	25.37	7	29.2	21.22	34	47.9	24.51
Trunks and bags	3.49	4.83	3.94	13	27.7	12.61	7	29.2	16.57	20	28.2	14.00
Stamps and stationery	4.96	2.38	4.09	47	100.0	4.96	19	79.2	3.01	66	93.0	4.40
Telephone calls and telegrams	5.40	2.38	4.38	26	55.3	9.75	7	29.2	8.17	33	46.5	9.42
Taxes	1.29	.04	.87	19	40.4	3.18	1	4.2	1.00	20	28.2	3.08
Cigarettes	1.76	1.32	1.61	7	14.9	11.83	2	8.3	15.80	9	12.7	12.71
Photographs, cameras, Kodak views	1.69	1.52	1.64	18	38.3	4.42	9	37.5	4.06	27	38.0	4.30
Travel	6.29	1.10	4.54	9	19.1	32.83	4	16.7	6.63	13	18.3	24.77
Plants and flowers	4.14	.34	2.86	24	51.1	8.11	5	20.8	1.64	29	40.8	6.99
Toilet articles and preparations	13.58	8.06	11.72	47	100.0	13.58	24	100.0	8.06	71	100.0	11.72
Beauty-parlor costs	10.49	5.62	8.84	39	83.0	12.64	15	62.5	9.00	54	76.1	11.63
Automobile:												
Payments	1.91	-------	1.27	1	2.1	90.00	----	-------	-------	1	1.4	90.00
Upkeep and garage rent	4.68	-------	3.10	3	6.4	73.33	----	-------	-------	3	4.2	73.33
Interest paid on debts	.70	-------	.46	3	6.4	10.93	----	-------	-------	3	4.2	10.93
Others	3.88	.65	2.79	5	10.6	36.48	1	4.2	15.60	6	8.5	33.00
Total, miscellaneous	205.53	107.88	172.52	47	100.0	205.53	24	100.0	107.88	71	100.0	172.52

Accident insurance was carried by three clerical workers who also carried life insurance, the average amount paid on the accident policies being $8.80. One factory worker was covered by group insurance paid entirely by her employer.

Gifts.—The largest proportion of miscellaneous expenditures (22.9 per cent) was devoted to gifts. This item includes presents made to relatives and friends and averaged $39.49 for all women. For the 64 women who reported an expenditure for this purpose the average spent was $43.81. As before stated, gifts received by the women during the year were counted as ordinary expenditures and included in the budget at a valuation equal to what the articles received would have cost if the women had purchased them.

Contributions to dependents.—Contributions to dependents for all women averaged $14.64 and constituted 8.5 per cent of all miscellaneous expenses. Seven clerical and three factory women contributed toward the support of dependents. In the majority of instances the amounts were given irregularly and ranged from $40 to $150. Two women assisted in the support of a sister, one contributing regularly $5 a month; two assisted in the care of a mother; and four contrib-

uted to both parents. One woman assisted two brothers and a sister and another contributed regularly $1 a week to the support of a son. For the 10 women having this expense the amount averaged $103.95.

Transportation.—Street-car fare to and from work for all women averaged $19.40, or 11.2 per cent of the total miscellaneous expenses. Some of these women used the bus part of the time in going to and from work. All rides to and from work—street car, bus, and automobile—for the 71 women averaged 361 and cost $26.87. Other rides for all women averaged 82 and cost $6.04 for the year.

Taxes.—The taxes paid by these women included poll, school, property, and State income taxes. The poll tax varied from $1 to $1.50. The highest tax paid was $10, covering property, poll, and school tax. For the 20 women reporting expense for this item, the average amount was $3.08. Divided among the 71 women the per capita average was 87 cents.

Cigarettes.—The cost of this item averaged $1.61 per capita for all the 71 women, and $12.71 for the 9 women reporting the use of cigarettes. The lowest cost was $7.80 and the highest $26.

Beauty parlor.—Beauty-parlor costs included care of hair, skin, and nails. For all the 71 women the average cost was $8.84, and for the 54 women having this expense, the amount was $11.63. The cost ranged from $2 to $60 for the women reporting.

Automobile expense.—Only one woman was making payments on an automobile. The cost of payments and upkeep was $190, or 45 per cent of the total miscellaneous expenses. This woman lived at home on an income of $1,303 and ended the year with a deficit in excess of her automobile expense. Two other women reported expense for upkeep on cars, the amount for one being $100, and for the other $20, which covered cost of oil and gas on a friend's car.

Interest on debts.—Three women reported an expense for this item. The amounts ranged from $7.80 to $13, and averaged $10.93.

Other items.—The larger items under other miscellaneous expenses included motor for a boat, insurance premiums for insurance policies on relatives, and payments to an employment agency which cost one woman $44.40 during the year.

IMMIGRATION AND EMIGRATION

Statistics of Immigration for July, 1932

By J. J. Kunna, Chief Statistician, United States Bureau of Immigration

ALIENS admitted to the United States in the first month of the new fiscal year beginning July, 1932, totaled 12,613. This is less than the average admitted during the preceding 12 months. There was, however, a large outward movement of passengers in July last, 35,417 aliens having left here during the month, or 11,446 above the monthly average number of alien departures for the fiscal year ended June 30, 1932.

Many Americans responded to the lure of strange countries during July, 1932, when the vacation exodus to Europe is at its height. The statistics show that 59,298 United States citizens left the country during this month. The women outnumbered the men among these departures, 32,547 as against 26,751; the vast majority departed for Europe via New York, 45,395 (24,908 females and 20,487 males), or 76 per cent of the total for the month, having embarked at that port. July, 1932, also saw the return of many tourists, 28,006 American citizens having arrived at all ports this month, with 19,451 landing at our principal seaport. In addition to the above, 4,497 citizens disembarked at New York during July after a cruise to foreign shores.

The major portion of the 12,613 aliens admitted in July, 1932, were visitors, persons on their way through the United States or returning residents, only 2,079, or one-sixth of the total, intending to make their permanent residence here. Among these newcomers, the females outnumbered the males by about 7 to 5, and less than 20 per cent of the total were male adults between the ages of 22 and 44 years.

Canada, Italy, Mexico, Germany, and Great Britain, in the order named, were the principal countries supplying newcomers in July, 1932, about two-thirds of the immigrants this month coming from these five countries. Nearly three-fifths of the permanent July departures were bound for Europe, 6,712 out of a total of 11,328 emigrant aliens for the month giving countries on that continent as their future permanent residence. Great Britain, Scandinavian countries, Germany, Italy, and the Irish Free State were the principal overseas destination of these emigrants, while 3,292 departed for Mexico, 455 for Asia, and 201 for Canada.

Of the 12,613 aliens of all classes admitted in July under the immigration act of 1924, 7,452 entered at New York and 2,906 at other seaports; 1,866 came in over the northern land border and 389 over the southern border. Only 7 per cent of the New York arrivals were charged to the quota, 534 of the aliens coming in that way being quota immigrants, while 3,566 were temporary visitors for business or pleasure, or passing through the country on their way elsewhere, 2,626 were returning residents, and 391 entered as husbands, wives, and unmarried children of American citizens. Natives of nonquota countries numbered 73, and miscellaneous classes 262. The two principal classes of admissions under the act at points along the land borders included 1,227 visitors and transits and 584 natives of nonquota countries, mainly Canada and Mexico.

Deportations in July last show an increase over the corresponding month of either of the two preceding years, 2,100 aliens having been deported under warrant proceedings during July, 1932, as compared with 1,681 for July, 1931, and 1,440 for July, 1930. In July, 1932, there were 84 indigent aliens returned to their native land at their own request.

INWARD AND OUTWARD PASSENGER MOVEMENT, YEAR ENDED JUNE 30, 1932, AND JULY, 1932

Period	Inward					Aliens debarred from entering [1]	Outward					Aliens deported after landing [2]
	Aliens admitted			United States citizens arrived	Total		Aliens departed			United States citizens departed	Total	
	Immigrant	Non-immigrant	Total				Emigrant	Non-emigrant	Total			
Year ended June 30, 1932	35,576	139,295	174,871	339,262	514,133	7,064	103,295	184,362	287,657	380,837	668,494	19,426
July, 1932	2,079	10,534	12,613	28,006	40,619	561	11,328	24,089	35,417	59,298	94,715	2,100

[1] These aliens are not included among arrivals, as they were not permitted to enter the United States.
[2] These aliens (exclusive of visitors across land borders) are included among aliens departed, they having entered the United States, legally or illegally, and later deported.

Recent Migration of Filipino Labor to Continental United States and Hawaii

ACCORDING to the annual report of the Governor-General of the Philippine Islands for 1930, the principal problem of the insular government is to prevent further exodus of Filipinos to the States. It is noted that a great deal of publicity had been given to the newspaper reports of labor disturbance in the United States and also to the fact that there was much unemployment and distress among the Filipinos in the western part of the United States. At the time the report was prepared, the facts concerning employment conditions were becoming generally known, and there was not such a tendency for young and adventurous Filipinos to come to the United States. The decrease in the number of these islanders migrating to the United States and the increase in the number leaving in 1930 as compared with 1929 are quite striking, as shown in the following table.

MIGRATION OF FILIPINOS, 1926 to 1930

Item	1926	1927	1928	1929	1930
Number going to continental United States:					
Males	----------	6,574	5,487	8,370	4,376
Females	----------	113	191	198	107
Number returning from continental United States:					
Males	----------	864	1,122	1,366	2,066
Females	----------	80	99	104	253
Number going to Hawaii:					
Men	2,977	9,784	9,026	8,189	7,185
Women	160	120	153	134	253
Minors	219	170	143	46	377
Total	3,356	10,074	9,322	8,369	7,815
Number returning from Hawaii:					
Men	2,562	2,410	3,968	3,402	2,897
Women	348	510	379	241	192
Minors	480	645	492	348	324
Total	3,390	3,565	4,839	3,991	3,413

PUBLICATIONS RELATING TO LABOR

Official—United States

KANSAS.—Commission of Labor and Industry. Labor Department. *Annual report, for the year ending December 31, 1931. Topeka, 1932. 64 pp.*

Includes information on operations under the State 8-hour law on public work, industrial welfare orders of the Commission of Labor and Industry, laws affecting Kansas children, factory and mine inspection, work of State free employment bureau, the Kansas industrial employment index, and emergency employment activities.

NEW JERSEY.—Department of Institutions and Agencies. *Publication 21: Incorporated homes for the aged (a directory). Trenton, 1931. 19 pp.*

Lists the homes and gives the entrance requirements of each.

NEW YORK.—Department of Social Welfare. *Directory of homes for the aged and other institutions for dependent adults in New York State. New York, 1932. 76 pp.*

Lists the various institutions and gives the entrance requirements of each.

—— —— Division of Old Age Security. *Annual report, 1930–31. Albany [1931?]. 14 pp. (Extract from sixty-fifth annual report of the State Department of Social Welfare.)*

Contains data as to amounts spent for old-age relief in New York City and in the rest of the State. Also gives an analysis of the first 28,533 applications granted, showing, for New York City and the other welfare districts, the sex, marital status, religion, age, nativity, etc.

The report points out that while the number of persons aided was considerably larger than had been anticipated, "at least one-third of the cost of old-age relief during the year is attributable to the depression."

The report recommends study of compulsory old-age insurance systems on a contributory basis with a view to putting such a system into effect in New York, pointing out that otherwise "the need of relief from the public treasury will continue and may increase from year to year."

OHIO.—Industrial Commission. Division of Safety and Hygiene. *Proceedings of the fifth all-Ohio safety congress, Columbus, April 19–21, 1932. Columbus, 1932. 662 pp.*

Addresses and discussions at the general sessions and sectional meetings of the congress.

UNITED STATES.—Congress. House of Representatives. Committee on Rules. *Immigration. Hearing (72d Cong., 1st sess.) on H. R. 10602, May 4, 1932. Washington, 1932. 26 pp.*

—— Department of Commerce. Bureau of Mines. *Bulletin 354: The ignition of fire damp by explosives, a study of the process of ignition by the Schlieren method, by W. C. F. Shepherd. Washington, 1932. 89 pp., diagrams, illus.*

One of a series of papers based on research or study by representatives of the United States Bureau of Mines and/or the Safety in Mines Research Board of Great Britain, with the object of developing methods of preventing or reducing accidents in coal mines.

—— —— —— *Bulletin 359: Permissible electric cap lamps and ventilation in certain California mines and water-tunnel contruction, by S. H. Ash and J. H. Rankin. Washington, 1932. 36 pp., maps, diagrams, illus.*

UNITED STATES.—Department of Commerce. Bureau of Mines. *Bulletin 362: Metal-mine accidents in the United States during the calendar year 1930, by William W. Adams. Washington, 1932. 97 pp.*

Reviewed in this issue.

——— ——— ——— *Bulletin 366: Quarry accidents in the United States during the calendar year 1930, by William W. Adams. Washington, 1932. 86 pp.*

Reviewed in this issue.

——— ——— ——— *Information Circular 6650: Management of labor in successful metal-mine operations, by Charles Will Wright. Washington, August, 1932. 35 pp., charts.*

——— ——— ——— *Technical Paper 530: Accidents at metallurgical works in the United States during the calendar year 1930, by William W. Adams. Washington, 1932. 34 pp.*

Reviewed in this issue.

——— Department of Labor. Women's Bureau. *Bulletin No. 94: State requirements for industrial lighting. A handbook for the protection of women workers, showing lighting standards and practices, by Marie Correll. Washington, 1932. 62 pp.*

Contains a partial reprint of the American Standard Code of Lighting: Factories, Mills, and Other Work Places, supplemented by explanations and suggestions, with an analysis of the State lighting codes or other requirements for industrial lighting.

Official—Foreign Countries

ALBERTA (CANADA).—Bureau of Labor. *Annual report, for the fiscal year 1931–32. Edmonton, 1932. 25 pp., charts.*

Presents classified weekly wage rates for males and females 18 years of age and over and under 18 years of age for the week of greatest employment in the year covered.

AMSTERDAM (NETHERLANDS).—Gemeente-Arbeidsbeurs. *Verslag over het jaar 1931. Amsterdam, 1932. 72 pp., charts. (Verslagen der bedrijven diensten en commissiën der gemeente Amsterdam, No. 2.)*

Annual report on the activities of public employment offices in the city of Amsterdam during 1931, including organization and personnel of employment service, registration, and placement by occupations and trades, unemployment, unemployment relief, cost of employment service, legislation, etc.

BRITISH COLUMBIA (CANADA).—Department of Labor. *Annual report for the year ended December 31, 1931. Victoria, 1932. 86 pp., charts.*

Wage data from this report are published in this issue.

BUDAPEST (HUNGARY).—Statisztikai Hivatala. *Budapest székesfőváros statisztikai és közigazgatási évkönyve, 1931. Budapest, 1931. [Various paging.] Map.*

Contains information in regard to Budapest for the year 1931, including labor conditions such as wages, employment service, unemployment, welfare work, health service, etc.

CANADA.—Department of Labor. *Eleventh report on organization in industry, commerce, and the professions in Canada, 1932. Ottawa, 1932. 144 pp.*

The various associations covered are classified in 18 groups. So far as returns were made, the date of formation, the membership, and the objects of each organization are given, and also the names and addresses of the chief executive officers for the present year.

——— ——— *Labor legislation in Canada, 1931. Ottawa, 1932. 106 pp.*

The third annual supplement to the report on labor legislation in the Dominion as existing December 31, 1928. Includes a cumulative index covering the contents of the basic volume and the supplements.

FRANCE.—Ministère du Travail. *Commentaire officiel de la loi des assurances sociales. Paris, 1932. 29 pp.*

An analysis of the French social insurance law.

FRANCE.—Statistique Générale. *Résultats statistique du recensement général de la population effectué le 7 Mars 1926. Tome IV. Paris, 1932. 207 pp.*

This volume of the report of the French census of 1926 shows the number of persons suffering from various types of infirmity, and the census by households showing the class of housing accommodations of families of different sizes.

GREAT BRITAIN.—Home Office. Factory Department. *Form 819: Memorandum on the use of blow lamps in factories. London, 1931. 7 pp., diagrams.*

Official recommendations for the prevention of explosions and fires resulting from the use of defective blow torches or improper operation of blow torches.

—— —— —— *Form 829: Memorandum on dust explosions in factories. London, 1930. 25 pp., diagrams, illus.*

Contains explanations of the causes of dust explosions in industrial establishments and recommendations of methods to avoid or minimize the hazards.

—— Ministry of Labor. *Report for the year 1931. London, 1932. 147 pp., charts. (Cmd. 4044.)*

Includes information on employment and unemployment, unemployment insurance, training for employment, industrial disputes, conciliation and arbitration, minimum wage rates of male and female workers, changes in wage rates and in cost of living, and membership of trade-unions. In some cases comparative data for years prior to 1931 are given.

HUNGARY.—Office Central Royal Hongrois de Statistique. *Annuaire statistique Hongrois, 1930. Budapest, 1932. 381 pp.*

Includes data on sickness insurance of agricultural workers, industrial accidents, employment service, unemployment, industrial disputes, public health, wages, hours of labor, etc., for 1930 and earlier years.

INDIA.—Commercial Intelligence Department. *Statistical abstract for British India. Sixty-fourth number. London, 1932. 824 pp.*

Contains also statistics relating to certain Indian States from 1920–21 to 1929–30. Data on cooperative societies and wholesale and retail prices are included.

JAPAN.—Department of Finance. *The thirty-first financial and economic annual of Japan, 1931. Tokyo [1931?]. 270 pp., map, charts. (In English.)*

Includes statistics on wages in various industries in 1930 and earlier years; number of workers, by industry, in 1929 in all manufacturing establishments employing over five persons; production in 1929 and earlier years (in the case of several products for the fiscal year 1930–31); and index numbers of wholesale and retail prices in 1931 (first 6 months) and earlier years, by months.

LEAGUE OF NATIONS.—Economic Intelligence Service. *Statistical year-book of the League of Nations, 1931/32. Geneva, 1932. 342 pp., maps. (World Peace Foundation, Boston, American agent.)*

QUEENSLAND (AUSTRALIA).—Department of Labor and Industry. *First annual report upon the operations and proceedings under "The income (unemployment relief) tax acts of 1930" for the year ended June 30, 1931. Brisbane, 1931. 46 pp., illus.*

Data on unemployment relief, taken from this report, are given in this issue of the Labor Review (p. 807).

—— Registrar-General's Office. *A B C of Queensland and Australian statistics. Brisbane, 1932. 326 pp., map.*

This, which is really the official yearbook of Queensland, adds to its usual statistics data concerning the unemployment-relief tax, and the receipts and expenditures of both the unemployed workers' insurance fund and the unemployment-relief work during the year ending June 30, 1931.

—— Unemployment Council. *Eighth annual report on operations under the unemployed workers' insurance acts, 1922 to 1930. Brisbane, 1931. 17 pp.*

Reviewed in this issue.

SWEDEN.—[Socialdepartementet.] Socialstyrelsen. *Kooperativ verksamhet i Sverige år 1930. Stockholm, 1932. 57 pp.*

Contains data on the activities and condition of cooperative societies in Sweden for the year 1930, including membership, financial condition, workers' productive associations, and the central union of cooperative associations in Sweden. Certain data from this report were used in the article on page 872 of this issue.

SWITZERLAND.—Office Fédéral des Assurances Sociales. [*Report for the year 1931. (Berne, 1932?)*] *22 pp. (Section du Rapport du Conseil Fédéral sur sa gestion en 1931.)*

Report of the Swiss Federal Bureau of Social Insurance for the year 1931, covering sickness, accidents, and old-age and survivors' insurance.

TOKYO (JAPAN).—Chamber of Commerce and Industry. *The annual statistical report, 1931. Tokyo, 1932. 272 pp.*

Includes data on wholesale and retail prices, wages, and production.

VICTORIA (AUSTRALIA).—Government Statist. *Fifty-fourth annual report on friendly societies, for the 12 months ended June 30, 1931. Melbourne, 1932. xviii, 15 pp.*

Returns for the year showed 52 separate societies, some of them with numerous branches, in Victoria, with a total membership of 161,448. Receipts for the year were £917,259 [$4,463,841], expenditures, £746,438 [$3,632,541], with funds on hand at the end of the year amounting to £5,291,238 [$25,749,810], or £32 15s. 6d. [$159.50] per member.

VIENNA (AUSTRIA).—Kammer für Arbeiter und Angestellte. *Handbuch arbeitsrechtlicher Gesetze und Entscheidungen, von Karl Wenzel. Band XII. Vienna, 1932. 392 pp.*

Deals with labor legislation in Austria, including trade agreements, labor protection, assemblage, works councils, hours of labor, labor conditions in bakeries, child and woman labor, vacations, domestic service, home work, etc.

Unofficial

AMERICAN CHILD HEALTH ASSOCIATION. *An inquiry into the health, nutritional, and social conditions in Puerto Rico as they may affect children. New York, 450 Seventh Avenue, [1931?]. 170 pp., charts.* [*Mimeographed.*]

Data on homesteads from this report are given in this issue of the Labor Review.

AMERICAN PUBLIC HEALTH ASSOCIATION. *Yearbook, 1931–1932. New York, 450 Seventh Avenue, 1932. 232 pp., diagrams, illus.*

Included in the reports of the various committees are reports on industrial fatigue, lead poisoning, pneumoconiosis, and standard practices in the problem of compensation of occupational diseases.

ANDREWS, JOHN B. *Labor problems and labor legislation. New York, American Association for Labor Legislation, 131 East 23d Street, 1932. 135 pp., maps, charts, illus.*

D'AVENEL, *G. Histoire économique de la propriété, des salaires, des denrées et de tous les prix en général depuis l'an 1200 jusqu'en l'an 1800. Tome VI bis tableaux. Paris, Librairie des Sciences Économiques et Sociales [no date]. Pp. 269–690.*

This report of wages and prices for the years 1200 to 1800, Vol. VI, 2d part, is part of an economic history of those centuries. The present volume consists entirely of tables of prices covering furnishings, including musical instruments, paintings, and various art objects and church vessels; building materials; metals; horses and carriages; weapons and arms; agricultural materials; and cost of transportation. Prices are given in francs of a certain silver equivalent and a table of coefficients is given in Vol. V, which furnish the basis for the computation of the present-day buying power of the money at the different periods.

BAADER, ERNST W. *Gewerbekrankheiten. Berlin, Urban & Schwarzenberg, 1931. 144 pp., charts, illus.*

Deals with industrial diseases, such as poisoning from lead, quicksilver, phosphorus, manganese, sulphur, and coal oxide; the effects of noise and dust; etc.

BAROU, N. *Cooperative banking. London, P. S. King & Son (Ltd.), 1932. 350 pp.*

An outline of the theory of cooperative banking and its practice all over the world. Deals with consumers' cooperative banks, quasi-cooperative banks (labor banks), small producers' banks in towns, agricultural banks, and cooperative banks for foreign trade, and finally international cooperative banking.

BASTET, JEAN. *Le travail forcé et l'organisation internationale. Paris, Librairie Générale de Droit & de Jurisprudence, 1932. 189 pp.*

A review of the work of the International Labor Office and the League of Nations in the control and regulation of forced labor.

BERG, PAUL. *Arbeidsrett. Oslo, Olaf Norlis, 1930. 312 pp.*

Deals with labor legislation in Norway, as regards employment, duties and rights of workers and employers, trade agreements, employment service, labor organizations, etc.

BIMBA, ANTHONY. *The Molly Maguires. New York, International Publishers, 1932. 144 pp., illus.*

An account of the struggle between mine owners and workers in the anthracite field of the United States in the period when the anthracite industry was young.

CASUALTY ACTUARIAL SOCIETY. *Proceedings, November 13, 1931. Vol. XVIII, Part I, No. 37. New York, 90 John Street, [1932?]. 252 pp., charts.*

Contains the papers read or presented at the eighteenth annual meeting of the society, held at New York, November 13, 1931. The papers include one on assembling and analyzing compensation insurance data, and one on the relation of compensation to wage levels of injured workers.

DEUTSCH-AMERIKANISCHE TYPOGRAPHIA. *Jahresbericht, 1. Juli 1931 bis 1. Juli 1932. [Chicago, Ill., 1932.] 16 pp.*

Annual report on the condition and activities of the unions of the German-American typographical workers for the fiscal year 1931–32. There is also appended a list of the German periodicals published in the United States.

EATON, ALLEN H. *Immigrant gifts to American life. New York, Russell Sage Foundation, 1932. 185 pp., illus.*

Describes the purpose and content of the exhibitions of the arts and crafts of the homelands of immigrants, which were held some years ago at Buffalo, Rochester, and Albany.

FREEMAN, JOSEPH. *The soviet worker: An account of the economic, social, and cultural status of labor in the U. S. S. R. New York, Liveright (Inc.), 1932. 408 pp.*

HALADJIAN, B. *De la crise a la prospérité; consultation relative à la crise économique mondiale, le mal et la remède. Paris, Librairie du Recueil Sirey, 1932. 135 pp.*

An analysis of the present economic crisis and its effects in different countries, measures undertaken or planned to combat it, and a proposal for its remedy through a centralized system of exchange of commodities.

HEDGES, M. H. *A strikeless industry—a cooperative plan for adjusting industrial relations. New York, John Day Co. (Pamphlet No. 9), 1932. 29 pp.*

Reviewed in this issue.

HOLLANDER, JACOB H. *Want and plenty. Boston and New York, Houghton Mifflin Co., 1932. 69 pp.*

HUDDLESON, JAMES H. *Accidents, neuroses and compensation. Baltimore, Williams & Wilkins Co., 1932. 256 pp., diagram.*

A scientific treatise on nervous and mental disorders in injured workers, planned to show the surgeon or the psychopathologist, in or out of industry, what neuroses mean and how to circumvent them or, if already established, the available avenues of approach and the practical methods of attack.

ICHOK, G. *Le travail des malades et des infirmes. Paris, Marcel Rivière, 1931. 317 pp.*

This work gives an account of the medical and hospital care of the sick and the victims of accidents in France and in other countries, of the measures taken for the vocational rehabilitation of such persons, and of the types of work suited to persons suffering from various diseases and physical handicaps.

INDUSTRIAL RELATIONS COUNSELORS (INC.). *Job analysis: A classified and annotated bibliography. New York, 165 Broadway, 1932. 59 pp.*

INTERNATIONAL INDUSTRIAL RELATIONS INSTITUTE. *World social economic planning: The necessity for planned adjustment of productive capacity and standards of living. The Hague, Holland, 1932. 935 pp., diagrams. 2 vols. (New York office, Room 600, 130 East Twenty-second Street.)*

JAHRBUCH DES ARBEITSRECHTS NEBST SOZIALPOLITISCHER ÜBERSICHT. *Band XII, 1931. Herausgegeben von Heinrich Hoeniger and others. Mannheim, J. Bensheimer, 1932. 466 pp.*

This yearbook contains information in regard to labor legislation, including a systematic review of the administration and interpretation of the labor laws and of the court decisions based upon the labor legislation in Austria in 1931.

KASKEL, WALTER. *Arbeitsrecht. Berlin, Julius Springer, 1932. 490 pp. (Enzyklopädie der Rechts- und Staatswissenschaft, XXXI.) 4th ed.*

Deals with labor legislation, its theories and application, including the history of such legislation in Germany, its principles and limitations, wage agreements, labor protection, woman and child labor, labor organizations, industrial disputes, arbitration, labor courts, boycotts, etc.

LABOR YEAR BOOK (BRITISH), 1932. *Issued by the general council of the Trades Union Congress and the national executive of the Labor Party. London, Labor Publications Department, [1932?]. 420 pp.*

Considerable space is given to the economic and political developments of the year covered as they bore upon the fortunes of labor in general and the Labor Party in particular. The usual review is made of the events of the year, and emphasis is laid upon the need of a planned reorganization in order to overcome the national and international depression.

LEDERER, EMIL. *Planwirtschaft. Tübingen, J. C. B. Mohr (Paul Siebeck), 1932. 48 pp.*

The booklet discusses planned industries, and questions as to whether such industries are possible through either revolutions or dialectical methods, credit control, or other methods.

LOREE, L. *The five major hazards of the workman. (Reprinted from Manufacturers Record, Baltimore, January 14 and 21, 1932.) 16 pp.*

This paper presents a discussion of the policies of the Delaware & Hudson Railroad in providing various types of insurance for employees, including the dismissal allowance paid on account of discharge for lack of work or for other causes.

LORWIN, L. L. *Advisory economic councils. Washington, Brookings Institution (Pamphlet Series No. 9), 1931. 84 pp.*

Deals with the origin and types of the advisory economic councils in various foreign countries with special emphasis on those in Germany and France, including criticism and defense of such councils, their relation to economic planning, their powers, position, procedure, international actions, and outlook toward the future.

LUCIUS, PIERRE. *Faillite du capitalisme? Une explication de la crise mondiale. Paris, Payot, 1932. 188 pp.*

The writer believes that the only way to remedy the economic ills of the world is through centralized control of production by organizations of employers, workers, and other interested persons, with these organizations operating under State control and direction.

METROPOLITAN LIFE INSURANCE CO. *Social Insurance Monograph 7: British experience with unemployment insurance. Part 1.—Economic and historical background. New York, 1 Madison Ave., 1932. 41 pp.*

This report is the first section of an analysis and summary of the evidence given before the Royal Commission on Unemployment Insurance which was appointed in December, 1930, to study the working of the British insurance system, and to make recommendations as to its future scope and provisions.

—— Policyholders Service Bureau. *Employees' suggestion systems. New York, 1 Madison Ave., [1932?] 24 pp., illus.*

Reviewed in this issue.

MINNESOTA, UNIVERSITY OF. Employment Stabilization Research Institute. *Bulletins, Vol. I, No. 2, Supplement: Monthly employment data for St. Paul, Minneapolis, and Duluth, 1931, by William H. Stead and Dreng Bjornaraa. Minneapolis, 1932. 19 pp.*

Shows employment in each of the three cities for each month of 1931, by industry, occupation, and sex.

—— —— *Minnesota Employment Review, Vol. I, No. 1. Minneapolis, August, 1932. 4 pp., chart.*

The first issue of a monthly publication to be issued by the Employment Stabilization Research Institute and the Tri-City Employment Stabilization Committee. Most of the information relates to the three cities St. Paul, Minneapolis, and Duluth and covers employment in May, 1932; the activities of the Minnesota Public Employment Service in June, 1932; and wage changes, working hours, value of building permits, family relief (St. Paul and Minneapolis), and cost of living (Minneapolis), for varying periods.

MUNICIPAL ADMINISTRATION SERVICE. *Publication No. 27: The administration of regulatory inspectional services in American cities, by Edna Trull. New York, 309 East 34th Street, 1932. 184 pp.*

NATIONAL BUREAU OF ECONOMIC RESEARCH (INC.): *Publication No. 20: The purchase of medical care through fixed periodic payment, by Pierce Williams. New York, 51 Madison Avenue, 1932. 308 pp.*

This report gives the results of a survey of the extent to which the principle of insurance is used in order to secure medical and hospital care in this country. It covers systems of fixed payment for medical service in different industries, industrial mutual benefit associations, commercial accident and health insurance, and trade-union sick benefit funds. There is also a chapter on the American campaign for compulsory sickness insurance, including a discussion of bills introduced in the legislatures of several States.

NATIONAL SAFETY COUNCIL (INC.). *Public Safety Series No. 26: Accident facts, 1932 edition, including industrial accident statistics. Chicago, 20 North Wacker Drive, 1932. 63 pp., charts.*

Reviewed in this issue.

RHEIN, ROGER. *Les allocations familiales obligatoires—le régime de la loi du 11 Mars 1932. Paris, Librairie du Recueil Sirey, 1932. 202 pp.*

This study of the scope and benefits of the new French law, generalizing family allowances by making them compulsory, includes a record of the evolution of such allowances in France and a review of the previous legislation in that country for the welfare of the family.

RICHTER, LUTZ. *Sozialversicherungsrecht. Berlin, Julius Springer, 1931. 235 pp. (Enzyklopädie der Rechts- und Staatswissenschaft, XXXIa.)*

Contains a review of the legislation connected with social insurance in Germany, including the status of the insured, contributions and benefits, public part in social insurance, and special phases of social insurance.

RITTERSHAUSEN, HEINRICH. *Arbeitslosigkeit und Kapitalbildung. Jena, Gustav Fischer, 1930. 154 pp.*

Deals with unemployment and building up of capital, including such topics as credit facilities, operation of credit institutions, financing of industries, etc.

SIMONS, A. M., AND SINAI, NATHAN. *The way of health insurance. Chicago, University of Chicago Press, 1932. 215 pp. (Publications of the committee on the study of dental practice of the American Dental Association, No. 6.)*

A study of the effect of compulsory health insurance upon medical service generally, including its effects upon physicians, dentists, and patients, and upon political and industrial conditions. The results of the operation of the principal health-insurance system in several European countries are analyzed, showing merits and defects of these systems.

SOUTH MANCHURIA RAILWAY. *Third report on progress in Manchuria, to 1932. Dairen, June, 1932. 235 pp., maps, charts, illus.*

Certain statistics on wages and hours contained in this report were published in the September, 1931, issue of the Labor Review (pp. 203–205), having been taken from the railway's second report on progress in Manchuria.

SOZIALISTISCHE ARBEITER-INTERNATIONALE. Secretariat. *Vierter Kongress, Wien, 25. Juli bis 1. August 1931. Berichte und Verhandlungen. Zurich, 1932. 896 pp.*

Proceedings of the fourth congress of the Labor and Socialist International, held from July 25 to August 1, 1931, in Vienna, Austria.

STEUERMANN, CARL. *La crise mondiale. Paris, Librairie Gallimard, [1932?]. 255 pp. ("Les documents bleus," Notre temps, No. 45.)*

This translation from the German is the eighth edition of the work. The subjects covered include a general discussion of the world crisis, unemployment and lowering of wages, profits of monopolies, economic planning, the Soviet experiment, and State socialism.

VALET, M. *Les restrictions à l'immigration. Paris, Librairie du Recueil Sirey, 1930. 226 pp.*

The three parts of this volume deal, respectively, with the policies of the principal countries of immigration, the general effects of immigration, and the effects of immigration in France.

VERBAND DER MALER, LACKIERER, ANSTREICHER, TÜNCHER UND WEISSBINDER DEUTSCHLANDS. *Jahrbuch, 1931. Hamburg, 1932. 149 pp., charts.*

The yearbook contains textual and statistical information in regard to the activities and condition of the German Union of Painters, Varnishers, House Painters, and Whitewashers during the year of 1931, including information on wages, industrial disputes, unemployment, and relief work, and financial statements.

WARRINER, D. *Combines and rationalisation in Germany, 1924–1928. London, P. S. King & Son (Ltd.), 1931. 226 pp., charts.*

Deals with the industrial and financial combine movement in Germany, including the extent of both market control and rationalization, the achievements of the combines and their effect on industrial conditions, and the problems to be met in the immediate future.

WEBER, ADOLF. *Der Kampf zwischen Kapital und Arbeit. Tübingen, J. C. B. Mohr (Paul Siebeck), 1930. 547 pp.*

Deals with the struggle between capital and labor on the basis of various socio-economic theories principally held by a number of German economists and business and labor leaders, including labor unions, employers' associations, the public, and the State.

WOLFERS, ARNOLD. *Amerikanische und deutsche Löhne. Berlin, Julius Springer, 1930. 139 pp.*

Compares American money and real wages with those of Germany, and finds that American wages are higher because the general income from production is higher than in Germany. Deals with the causes of higher income in America and with higher wages as a cause of higher efficiency of the worker, as promoting rationalization of industry, as a cause of mass production, and as a means against underconsumption.

WOYTINSKY, WL. *Internationale Hebung der Preise als Ausweg aus der Krise. Leipzig, Hans Buske, 1931. 163 pp., charts. (Veröffentlichungen der Frankfurter Gesellschaft für Konjunkturforschung, Neue Folge, Heft 1.)*

Deals with the topic of an international raising of prices as a way out of the present depression.

—— *Statistik der Arbeit. Berlin, Werk und Wirtschaft, 1932. 40 pp. (Sonderdruck aus dem Internationalen Handworterbuch des Gewerkschaftswesens.)*

Contains information on labor forces, employment, wage agreements, hours of labor, wages, cost of living, labor unions, etc. Some data are quoted in international comparison.

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